

MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XLIII. No. 16.
WEEKLY.

BALTIMORE, MAY 7, 1903.

\$4.00 A YEAR.
SINGLE COPIES, 10 CENTS.

Manufacturers' Record.

PUBLISHED EVERY THURSDAY BY THE
Manufacturers' Record Publishing Co.

RICHARD H. EDMONDS, President.
THOMAS P. GRASTY, Vice-President.
FRANK GOULD, Secretary-Treasurer.

OFFICE: MANUFACTURERS' RECORD BUILDING,
BALTIMORE.

RICHARD H. EDMONDS,
Editor and General Manager.

THOMAS P. GRASTY,
General Staff Correspondent.

SUBSCRIPTION, - - - \$4.00 a Year.
TO FOREIGN COUNTRIES, - - 25s. 6d. a Year.

BALTIMORE, MAY 7, 1903.

COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week.

For the first issue in the month we should receive copy by Friday Morning of the week preceding.

In a letter to the Manufacturers' Record the Tupelo Tank Co. of Mobile, Ala., writes:

The advertisement we placed with you some time ago was an experiment, and we are more than satisfied with the result. We shall continue it indefinitely.

ATTEMPT TO SHIFT THE ISSUE IN THE SOUTHERN EDUCATION SCHEME.

Ardent to defend the Southern Education Scheme against criticism justified by facts, the Rev. A. J. McKelway of Charlotte, N. C., has uncovered a mare's nest and has discovered within it the Charlotte Observer, the Charleston News and Courier and the Manufacturers' Record. Forgetting the admirable logic underlying the system of theology in which he was trained, he has become a medium, and, perhaps, an unwitting one, in the pitiable effort to shift the subject of debate and to substitute for healthy rejoinder far-fetched imputation of motives.

Discussion of the Southern Education Scheme must descend to a profitless plane if permitted to turn upon the question of motives of men seeking to advance it or of men seeking to suppress it. Ascertainable facts about it, as bearing upon possible results, are the things to be considered with cool head and in desire to enlighten the public. If statements about it are incorrect they should be denied with proof; if they are facts they cannot be discounted by weak excuses, but will be given all the weight they deserve.

The temper of the Rev. A. J. McKelway's paper does not improve with age or use. It seems to have appeared first in his own paper, the Presbyterian Standard. Thus it was credited by the Raleigh News and Observer of April 23 in reprinting it. Again it reappeared in the Baltimore Sun of April 29 as a communication, with references to the Standard eliminated and

a couple of slight changes, from the Rev. A. J. McKelway. The ethics of journalism, to which its author refers so knowingly, permits the iteration of statements and even the language of deductions from them whenever necessary, but a newspaper, in accepting an article as original, usually prefers that the reproduction of statements and comments have something of a rearrangement or a fresh framing.

But the ubiquity, the one-act continuous performance, of the Rev. Mr. McKelway's article must not be attributed to his admiration of it. That might be unjust. Doubtless he is as hard-working as his article. Nor should he be unduly censured because of the tone he has adopted. All of us humans are liable to speak or act unadvisedly at times.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 69, 70 and 71.

RAILWAYS AND NATIONAL UNITY.

A writer in the London Times, discussing the marvelous advance made by the South during the past twenty-five years and the influences in that toward a more thorough understanding among different sections of the country, notes lumbering as one of the factors earliest in development. The building of saw-mills to make marketable valuable forests of pine, cypress, oak and other timber, followed by the construction of railroads, he regards as a pioneer form of investment of Northern capital in the South. Iron and steel works, bound to rise where ore, fuel and flux are in close proximity, the building of cotton mills near the cotton fields and the utilization of the by-products of the cotton plant, the expansion of rice-growing in Louisiana under a system of modern irrigation, the discovery of oil and the growth of various woodworking industries are also given due consideration, but the writer seems to be impressed more particularly with the unifying work done by the railroads in accelerating the growing of early fruit and vegetables for Northern and Western markets, in building up the import and export business of Southern ports and in attracting desirable immigrants to the cheaper and more productive lands of the South. The writer mentions especially the Illinois Central Railroad, and, referring to the truck business, says:

The direct line of the Illinois Central Railroad Co. from Chicago to New Orleans is 912 miles long, and such is the diversity of climates covered by this one line of railway that during my visit to New Orleans early in February the fruiterers there were displaying for sale strawberries grown in the open air in Louisiana, while at the other end of the line the city of Chicago was struggling with a blockade of ice and snow. The outcome of this is that in the opening months of the year the Illinois Central takes large quantities of early vegetables from Louisiana to Chicago. In a single day as many as twelve carloads of cucumbers have been sent to Chicago from New Orleans, a carload

representing between 24,000 pounds and 30,000 pounds, and from ten to fifteen cars of tomatoes will go each day in the local season from Crystal Springs, a record consignment being thirty-three carloads of tomatoes to Chicago from this one point alone. Potatoes are taken in carload lots at the rate of from ten to twenty cars a day, and cabbages and lettuces also go in large quantities. This branch of traffic begins from New Orleans in January. By the time the Louisiana fruit and vegetable season is over that of Tennessee and Missouri will have begun, and so the railway goes on carrying fresh fruits and vegetables from those States to the North until the season there has fairly commenced, the northbound traffic being especially heavy in April and May. Then about July 1 the business starts afresh in the contrary direction. Vegetables grown in the South will not keep long, owing to the excessive moisture of the soil, and by the time that the Northern supplies are ready those of the South are exhausted, and the more hardy growths from the North are especially welcome as a means of supplying Southern wants until January comes around again. To the Illinois Central (the chief line concerned), with its 5000 miles of railroad, including widespread ramifications in the North, this naturally means a good all-the-year-round business, in addition to the considerable amount of other freight it handles, so that the company has found it necessary to arrange for a double track between New Orleans and Chicago, the possession of which will put it in an almost unique position among the Western and Southern railways.

This correspondent, who seems to have confined his observations principally to the lower Mississippi valley, evidently knew nothing of the industrial and commercial spirit of the South half a century ago, and naturally viewed present-day developments as something new. He was doubtless unaware, too, of the immense north-and-south traffic of the railroads along the seaboard and through the Piedmont South, and he would doubtless be surprised to learn how great a proportion of the capital in Southern industries was home-made during the past twenty-five years, and now much of the directing force of those industries is native.

Still, the importance of Northern investments in the South and of the organization of great railway systems like the Illinois Central, the Southern and the Seaboard Air Line may hardly be overestimated in a survey of recent American history and in prophecy of the next few years. To the construction of east-and-west lines of transportation in the earlier part of the last century must be attributed the magnificent development of the middle West and the subsequent filling up of that region and the Northwest with millions of immigrants, while the South, crippled by war and lying almost fallow for fifteen or twenty years thereafter, was practically neglected by the homeseeker and the outside investor. But its natural resources above and below ground were too great to escape observation for a great while. Development had to come. Southerners led in it and were encouraged by the faith of such men as Abram S. Hewitt. As before the war, so afterward, the older States of the South were depleted by a movement toward their west of population which was not replaced to any extent by immigration, the causes being various. But with re-

cuperation has come a greater stability of the white population in spite of apparent contradictions here and there; the rise of industries has given employment to hundreds of thousands of persons and has created a demand for more people, while a better acquaintance with Southern conditions consequent upon this industrial activity has attracted widespread attention to agricultural and kindred opportunities in the South. For all of which, for the steady expansion of manufacturing, for the profitable and progressive diversification of farming, for the influx of men and money, the railroads changing from small independent lines operated upon rather antiquated plans to strong systems, models of financing and engineering methods, are largely to be thanked. One mile of steel rails laid, making closer and quicker communication between the Gulf and the Ohio and Potomac, or between the seaboard and the West and Northwest, is worth more for national unity than a thousand "reunion" speeches by orators seeking to promote some scheme or other, more or less personal, while one dollar of capital invested in industry is worth more than ten dollars pumped in as philanthropy.

FOR EDUCATION AT ATLANTA.

One day of the National Conference of Charities and Correction at Atlanta this week is to be devoted to a discussion of "child labor." This will, no doubt, bring to the front more than one of the interesting characters who for a couple of years past have, in their enthusiastic ignorance, been scattering considerable perfervid language and misinformation about Southern conditions under the impression that they were going to revolutionize human nature in five minutes. That they have been compelled, under the influence of painstaking, conscientious teachers, to compromise and to modify radically their point of view has not, unfortunately for them, tempered their enthusiasm with modesty. But at Atlanta it is not unlikely that they will meet men prepared to educate them further. Their attention may be called to some comments upon Southern industrial conditions suggested by the distressing situation at Lowell, Mass. Referring to that, the idleness of 18,000 operatives, induced "by a handful of wrong-headed men who were not of the number of her workmen," the New York Journal of Commerce says:

For all the lower grades of goods a formidable competition has sprung up in the South near the cotton fields, with cheaper labor, less restriction by law and union rules and other more favorable conditions. To save themselves New England mill owners have been transferring some of their own capital to Southern mills, and their operatives seem to be determined to drive them to further investments in that section. In short, the labor union, instead of helping them to maintain the struggle and save their industry from languishing or being transplanted from the ground upon which it has grown up and flourished for so many years, are making it more difficult and threatening all but the strongest with bankruptcy.

There could be no more striking illustration of the lack of intelligence and reason, the want of business sense, with which the labor leaders are so apt to proceed, and until they learn to use more rational methods and cease their autocratic and arbitrary way of dealing with conditions that they do not understand and seek no means of being enlightened about, they need not wonder at the reluctance of employers to recognize the organizations which they assume to direct, or even at their desire to destroy a power that is so apt to be misused.

But a champion of these handful of wrong-headed men has arisen in the person of Lieutenant-Governor Guild of Massachusetts, who naturally expects to become governor in due season, largely with the assistance of the handful and their deluded followers. He would preach a crusade against Southern industries, and the speech in which he set forth his desire—about the same speech he delivered six years ago—must have embarrassed the New England Cotton Manufacturers' Association by its demagoguery and ignorance. There is no palliation for the demagoguery, but the ignorance may be justified by the fact that essentially it is no greater than the ignorance which has been manifested by Southern dupes of the handful of wrong-headed men in New England who have shrewdly endeavored to strengthen their waning power by disorganizing Southern industrial conditions, their preliminary step being the raising of an issue, largely bogus, appealing to the noblest sympathies of men and women.

SEPARATING SCHOOL TAXES.

A perfectly natural effect of the unwelcome insistence by outside theorists upon like training for blacks and whites in common schools is the movement here and there in the South for constitutional amendment permitting a division of money for school purposes according to the amount of taxes paid by whites and negroes, respectively. A political candidate in Mississippi is making his campaign upon that issue. The Arkansas legislature recently passed an act looking to that end, but within a week reconsidered it. Last week the lower house of the Florida legislature passed a joint resolution providing for a constitutional amendment permitting the expenditure for the education of negroes only such taxes as may be paid by them. Arguments in favor of such a proposition are that the whites are more than wasting millions of dollars—more than a hundred million during the past thirty years—upon the schools for negroes, in that the negroes are spoiled for careers suiting them; that this waste hampers the efforts for proper education of the whites, and that the movement for Southern "education," generated three or four years ago, is calculated to confirm the South in educational mistakes foisted upon it when it was helpless and under the domination of the negro backed by bayonets.

The radical policy advocated in the resolution of the Florida house of delegates, while superficially excusable, is not the remedy. That lies, first of all, in a cultivation of a determination that the South shall settle of itself and by itself its own educational problem, and shall resist all efforts, however speciously advocated, to keep the negro question in confusion. The determination implies an unwillingness to accept funds from outside, either from individual philanthropy or as a result of congressional action, requiring an acknowledgment in word or deed that there shall be like training for blacks and whites. There has been too much

of that sort of thing already in the South, to its detriment. But as long as the theory obtains that the State must guarantee the salvation of citizens from ignorance, the principle must be maintained that the energies of the State shall be directed in practical channels; that the individual is to be considered if the community is to be uninjured; that the training of the black race must be different from the training of the white race, and that public moneys for real education must be distributed not per capita, but per capacity.

LOCOMOTIVE BUILDING.

Press dispatches from Chicago report the announcement that the Chicago, Milwaukee & St. Paul Railway Co. is now in position to build in its own shops every locomotive required on the system. It is stated that company's new locomotive works are immediately outside of the city of Milwaukee and have a capacity of from seventy-five to eighty engines a year.

While it is undoubtedly wise and prudent for a large railroad system to provide itself with a locomotive shop in which a certain number of engines could be built each year in order to meet emergencies when locomotive-building companies were either rushed with orders or otherwise embarrassed so as to be unable to promptly meet the demands of railroads, it is probably not good business judgment for a railway corporation to so extensively engage in the manufacture of locomotives as to be able to supply all of its requirements. It has been repeatedly asserted, and the statement appears to rest upon the sound foundations of the fact, that locomotives built at a railway company's works invariably cost it more than similar engines built by firms or companies which confine themselves exclusively to the manufacture of such machines upon a very large scale.

Notwithstanding the fact that it has large and very complete locomotive works, the Pennsylvania Railroad Co. annually purchases large numbers of engines from other builders. The Baltimore & Ohio Railroad Co., now closely related to the Pennsylvania, used to build many of its own engines at its Mount Clare shops in Baltimore, but has for some years bought all of its new locomotives, reserving its own shops for repairs and rebuilding. It is no more than natural to conclude, and the conclusion seems in every way to be sustained by the facts, that the locomotive-building firms and corporations, by reason of the extent of their operations and their close touch with the market for materials, are able to sell locomotives at prices which would render it more advantageous for railroad companies to purchase engines from them than to build the machines themselves.

THE PANAMA CANAL.

On another page of this week's issue of the Manufacturers' Record is a vigorous article by Mr. Courtenay DeKalb calling attention to certain vital questions that must be considered in connection with the construction of an isthmian canal. The article is a sharp, decisive insistence that aside from engineering problems to be solved, the construction of the canal demands the strictest fidelity to responsibilities on the part of Congress, the executive branch of the government and the contractors actually to be engaged in the work. Upon the latter point Mr. DeKalb lays especial stress, and particu-

larly as it is related to the discipline necessary to ensure reasonable health and best results from laborers, and he urges that most rigid military discipline should be enforced.

Mr. DeKalb writes from the standpoint of a trained engineer of wide experience in Central and South America, and of almost encyclopedic knowledge of conditions in those lands, and as a careful student of the history of the Suez canal and of attempts to pierce the American isthmus. His timely article should therefore appeal strongly to everyone desiring that the chance for the waterway be seized with honest conservatism.

INDUSTRIES FOR THE SOUTH.

The Memphis Commercial Appeal says that, according to figures in the possession of Mr. George C. Power, industrial commissioner of the Illinois Central Railroad, that company has already located along its line as many industries during this fiscal year, which ends on June 30, as it did for the entire fiscal year next preceding, and furthermore, that the Southern lines of the company have received about 60 per cent. of these industries. Mr. Power is also reported to be negotiating with four or five large factories which are desirous of locating at Memphis.

This gratifying showing by the Illinois Central is one which will be repeated again and again along its lines, and also along the lines of other companies in the South, as the advantages of that section of our country become better known. The South possesses not only an abundance of and variety of raw material for manufactures, but enjoys a climate that is conducive to industry during the entire year.

In a letter to the Manufacturers' Record S. H. Schoolfield, general manager of the Mullins Lumber & Brick Co., Mullins, S. C., writes:

We find the Manufacturers' Record very helpful, and would not do without it for twice the subscription price, as we think it saves us that much several times each year. You are doing a great work for the South besides.

BUYERS GETTING RESTLESS.

Large Number of Inquiries in the Birmingham Market.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., May 4.

Some little buying of pig-iron the last few days has had the effect of brightening things considerably, and the ironmakers now assert boldly that there will, under no consideration, be another reduction. Over against the dullness of the market for the past few days is the impression that is gaining ground in the minds of both brokers and manufacturers that the present range of prices will not only be maintained, but that an advance would not be a surprise. An agent of a leading firm of brokers said today that he would not be surprised if there was an advance in the price secured before very much longer; in fact, he said he would be surprised if there was not a higher range, and looked for the betterment to commence in a few days. He pointed out that the consumer is out of iron. The sales of the furnaces show that he is buying from hand to mouth, looking for a lower range. He has been at this for some time. There has not yet been sold as much as 20 per cent. of the prospective Southern melt for the last half of this year. This in itself indicates the poverty of the yards of the foundrymen. There is no question but what they must have iron. The difference in price of Southern

and foreign irons has become so little the latter cannot compete with the former, and the movement of the product is so nearly equal that there is no storing on any yards. Thus it is seen that the consumers are up against this kind of a situation: The last half of the year is nearly here, the furnaces have orders to run them until it is inaugurated, and some hustling is going to be necessary to cover. Old market men think it will result in a rush when the buying does start that will run the price up, as this has been the history of such movements for years.

Among the sales of the past few days was one of 500 tons of gray forge, which did more than any one sale for some time to make the sellers feel good. The price obtained was \$16, and it is considered that this is proof that buyers are looking for supply. It is a well-known fact that the pipe works are very busy, and that the rolling mills are doing especially well for the time of year. These two interests have absorbed a great deal of iron within the past few weeks. All of the foundries are filled up on orders, and in many cases they have little iron ahead to take care of them. Some of the other orders were for small lots of No. 2 and other foundry grades.

Another strong feature of the market is the large number of inquiries, showing that the buyers are getting restless. The aggregate of tonnage comprised in recent inquiries is very large.

No. 2 Woodstock furnace at Anniston is ready for the torch. It will make 300 tons a day, and is one of the large iron-makers of the State.

The talk of the United States Steel Corporation coming into the district is not given a great deal of credit these last few days. It is a fact, however, that if the price of iron holds up this fall and winter, as it seems to promise, and there are no labor troubles, at least three more furnaces will be erected in the district.

The Alabama Steel & Wire Co. has closed its rod department at Eusley because of expiration of the contract with the Tennessee Company for steel. The nail department will go ahead, having material enough on hand to last until the new steel mill at Gadsden gets to work, which will be about next January.

The new machinery at the steel mill at Eusley has been installed and the mill is doing well, making over 4000 tons last week. The rail mill is also increasing output and is having a big demand for the product.
H. W. L.

THE ST. LOUIS EXPOSITION.

Significant Features of the Dedication Exercises.

[Special Cor. Manufacturers' Record.]
St. Louis, Mo., May 4.

The dedicatory services held in St. Louis last week, commemorating the one hundredth anniversary of the Louisiana purchase, and ceremoniously consecrating the World's Fair buildings to the uses of next year's great exposition, served to fix the attention of the world on the magnitude and importance of that undertaking, and, according to the views of those participating, insured its success along lines of the greatest possible magnitude. Addresses of historic interest and present significance were delivered by President Roosevelt and ex-President Cleveland, and there were addresses of equally commendatory character delivered by representatives of the foreign diplomats and governors of States, who were present in large numbers. There were unusually imposing military and civic parades on two of the three days devoted to the ceremonies, and dinners, social entertainment and elaborate fire-

as were additional features of the festivities.

A noteworthy declaration by President D. R. Francis at the dinner to visiting newspaper men was that under no conceivable circumstances short of destruction of the buildings or unforeseen act of Providence would there be any postponement of the fair, which is to open May 1, 1904. This, in answer to rumors which had begun to be circulated to the effect that a second postponement was contemplated. As the visitors found many of the buildings in an advanced state, many of them practically finished, it was no draft on their credulity to take Mr. Francis at his word. Furthermore, on familiarizing themselves with the plans and the scope of the exposition, it was the enthusiastic verdict of the visitors that the St. Louis Exposition will far outshine any world's fair ever before known.

The presence of several hundred thousand visitors in St. Louis tested the hotel, street-car and railroad facilities, and gave pointers as to what must be done for the crowds next year. Admittedly, there must be more hotel room for the fair, although by a systematic canvass of private residences and boarding-houses an information bureau conducted by the World's Fair management was enabled to prevent any great hardship this year, and much will be accomplished along the same line next year. This, with the several new hotels which are either under contract or in contemplation, will probably make the lot of the World's Fair visitor as comfortable as is possible in a crowd. That some inconveniences are inevitable everyone knows who has ever attended a great gathering at any city whatsoever, New York by no means excepted.

There were defects in the street-car service, although they may be readily remedied by increased power and such switching facilities as will enable the cars to be handled more expeditiously. New cars are to be provided, and with the defects now demonstrated it is reasonably certain that a very excellent service will be provided for World's Fair visitors. Indeed, the management did rather surprisingly well, all things considered, in handling this year's crowds.

The railroads forming the Terminal Association here have plans for very much more extensive depot accommodations, and it is declared that without franchises and concessions which the city and State have so far been strongly averse to giving, it will be impossible to provide such facilities as will be required for comfortably handling next year's big crowds.

Altogether, however, St. Louis has inspired confidence by the way the opening exercises of the World's Fair have been conducted.

ALBERT PHENIS.

Looking for an Industrial Site.

Southern cities desirous of attracting new industries may be interested in the notice published elsewhere in this issue of the Manufacturers' Record of a corporation desiring to establish a large plant for the manufacture of fireproof sheet-metal building material, and soliciting correspondence from towns and cities that may offer inducements.

It is expected that work upon the construction of the Colbert Shoals canal for the improvement of the Tennessee river will begin within a few weeks. The money available for the purpose is \$545,000, which is sufficient for the excavation and the river walls.

THE PANAMA CANAL: GUARANTEES OF HONESTY NEEDED.

By COURTENAY DEKALE.

[Written for the Manufacturers' Record.]

The chances of having at last a ship canal across the isthmus are brighter than ever before. The certainty of the American government expending vast sums in construction work upon such a project is absolute. Between the attempt and the consummation lies a great gulf. Aside from all considerations of engineering difficulties there exist grave questions of the fidelity of purpose of those in whose hands will rest the responsibility for building the canal. This responsibility will devolve upon three groups of men, to wit: First, Congress, the body with whom lies the initiation of all that is or may be done; with whom rests the power of investigation and correction of the grosser sort of administrative evils that might creep in; the body which will first and last be supremely powerful, and whose tendency to vengeance must be placated, as poor mere men must ever propitiate with sacrifices the all-terrible gods—because Congress holds the purse strings. Second, the executive branch of the government, whose effort is to maintain respectability and prevent public scandals, whose middle position between all clamoring classes and whose immediate availability as a target for public condemnation endanger the free hand and fearless step which only men of heroic cast can assume under such conditions. Third, the contractors, whose aims will depend largely upon what other masters their services are pledged to; if merely seekers after a maximum profit out of this specific enterprise they will only endeavor to prolong the work; if pledged to transcontinental railway interests, either directly or indirectly, after so many years of bitter railroad warfare against any trans-isthmian canal, it is hardly conceivable that the outcome of their labors (all available appropriations by Congress being first consumed) would be other than an apparent demonstration of the unfeasibility of construction of the canal.

The pessimism in all this is frankly conceded; it is as frankly defended on the ground of persistently repeated demonstration in every branch of our public life of the vilest corruption and most disgraceful auction of the rights of the people to the men or corporations who will pay the most and who possess the cash to pay with. If a canal is to be built honestly, in the interests of the nation, as an "extension of our coast line" to promote the growth and common advantage of both the East and the West, the first symptom of such honesty of motive in the controlling powers should be a rigid limitation of the amount of work (narrowed to limits relatively small in proportion to the whole) which may be advanced to any one contracting firm or company, carrying this even to the point of examination into the *personnel* of the bidding contractors, so as to insure the keenest rivalry and competition compatible with doing the work on a large enough scale to avail of the most modern methods for economical excavation and construction.

A second evidence of honesty of intention will be appropriate enabling legislation to permit of rational control of the labor question. This is one of the most serious problems confronting us in this business of building a great canal in one of the unhealthiest regions on earth. Certain facts are to be posted in advance—facts which "he who runs may read."

1. Yellow fever is endemic on the Isthmus of Panama; foreigners contract it

more readily than natives; previous residence in the tropics or tropical ancestry does not make one immune; the disease is preventible; the fatality percentage varies markedly with the provisions for hospital service and ample or scanty attendance of nurses.

2. Malarial fevers are not usually dangerous; they commonly yield readily to treatment if taken in time; they are all preventible; the general health of the individual, if good, may ward off the disease, even when care has not been exercised to avoid exposure to it.

3. So far as we now know both yellow fever and malaria are contracted by exposure to the bites of certain species of mosquitoes which fly and bite only at night.

4. Bilious fever is the gravest danger confronting foreigners in hot climates. It is not preventible, but its dangers may be lessened by prudent living and avoidance of every condition that may tend to overwork the liver (rational food) and by exercising care not to contract a chill by exposure to drafts or by getting wet and failing to exercise freely until dry or until a change of apparel can be made.

5. Dissipation in all forms predisposes in an extreme degree to tropical ills, particularly to bilious disorders.

6. The maintenance of a full force in good physical condition is an essential to success in the conduct of any great engineering enterprise.

7. The Suez canal would not have been built but for the absolute military authority which permitted of construction regardless of enormous destruction of human life. This would have been impossible except under a condition of imperial absolutism in a country teeming with a population representing nearly the lowest plane of human existence. Such conditions were not present to aid M. de Lesseps when he undertook to build the Panama canal.

8. The labor question was one of the most serious difficulties encountered at Panama; in one sense greater than that occasioned by corruption of officials and by engineering incompetence, because it prevented continuous efficiency of effort which might have achieved important results in spite of other disadvantages and administrative evils. The West Indies failed utterly to yield an adequate supply of workers. The negroes of the West Indies, after a little time, refused to be mustered for service at Panama through fear of death. Africa and the East Indies were drawn upon in vain. No laborers could be found anywhere in the world who were proof against disease provoked by the conditions obtaining in Panama under the French regime. Discipline of laborers and attention to sanitation were practically *nil*. Such bestial dissipation as took place at Panama has never before been witnessed in modern times, and perhaps in no times, not even in ancient Babylon.

9. No contractor can enjoy any advantages over another in securing better workmen, nor in paying lower wages, in the proposed construction of the canal.

10. American negroes and Mediterranean laborers can endure the climate moderately well within economical limits as to average hours of effective labor rendered *per diem* per man maintained if they are prevented from violating the rules needful to preserve health in the tropics. This can only be carried out by rigid military discipline, enlisting men on

a basis similar to that in vogue for the army and maintaining the discipline by measures equally severe. The surgeons of our army are the most competent body in America, if given full authority to draw up rules and regulations covering hours of labor, clothing, food, recreation and sleep which will insure the greatest possible healthfulness and efficiency of the working force. Such discipline can only be established under authority from Congress. The enactment of appropriate legislation will be one proof that the American people are not to be trifled with by expending their money to the extent of some \$250,000,000, only to be told at the end that the work is but half finished or cannot be completed at all.

If Congress will perform its duty and if the executive department will limit the size of contracts rationally and not award them to those connected with historically hostile interests, we may feel some assurance of escaping a gigantic fiasco. If not, we may anticipate a scandal as much greater than that of the French boodlers as America is bigger than France.

KEYNOTES OF PROSPERITY.

More Letters from Manufacturers Telling of Business Activity.

Since last week's issue of the Manufacturers' Record, in which were published letters from many manufacturers and others presenting a picture of gratifying industrial activities in the country, a number of other letters on the same line have been received telling the same story. They follow:

New Manufacturing Industries.

Thos. H. Williams, president A. A. Griffing Iron Co., Jersey City, N. J.: "Our business is very prosperous, and we consider the outlook for the future to be bright. Never has there been more manufacturing industries exploited than at present, and this indicates accurately the prosperity of the country. As we manufacture goods both for heating buildings as well as steam specialties for use in power plants, our business is directly affected by the number of building projects exploited."

Prosperity to Increase.

L. Lewis Sagendorph, president and manager the Penn Metal Ceiling & Roofing Co., Philadelphia, Pa.: "We have never known business to be of such volume in our line. Since we entered the field in the East in 1889 we have doubled our capacity, and with this extension we are still unable to fill our orders promptly, and during the month of April we had to refuse many large orders, as we had more than it was possible for us to attend to. The margin of profit is considerably smaller than it was several years ago, but the volume of business is much greater. We see nothing at the present time to indicate a discontinuance of this volume of business, but undoubtedly it will increase, as we are shipping large quantities into the foreign countries in carload lots, besides small, miscellaneous lots, and the activity and prosperity distributed throughout the United States calls for so many new buildings that our trade in the line of exterior covering of buildings is immense. Our new industry, which is now about ten years old with us here in Philadelphia—metal ceilings for the interior of buildings—has grown tremendously. In 1894 we had a great deal of hard work to persuade prospective buyers to adapt metal ceilings in place of plaster, and the consumption was small at that time in tonnage, but at the present time we have very little trouble to persuade the consumer to use this character of interior finishing. We have many competitors,

and, of course, prices have been cut considerably. It has become a household commodity among contractors and builders, through the specifications of the architects, to finish the interior, sides and ceilings with embossed metal. About 40 per cent. of our business in this line is in a channel of renovating old buildings—that is, in the interior, applying the metal directly over the plastered walls and ceilings. We are working from Maine to California, and have a large number of the best class of mechanics and artists distributed throughout the United States erecting and decorating this work. We also have a large line of first-class customers who have been taught the mechanical part in erecting, and have educated their home painters in the decorations. We also enjoy a very brisk trade from church people, having on our books continually from ten to twenty churches in advance ready for our work as soon as we can get around to do it. So, to take it all collectively, the prosperity that this country has enjoyed for the past five years, we think, will continue for five to ten years more, and increase rather than diminish in volume."

A Lessening Activity.

James M. Hibbs, secretary Hoopes & Townsend Company, manufacturer of bolts, cold-punched nuts, washers, etc., Philadelphia: "There is an evident tendency towards less activity. There is more pressure for orders, and some manufacturers, at least, report a lessened demand. We believe it will require some severe shock to endanger the present business momentum, and when the demand begins to lessen, as it already seems to have done, the lessening will be very gradual. We believe that good business conditions will exist for some time to come, and we learn that other lines of business are feeling the pressure more than those who are engaged in the manufacture of iron and steel or their products."

With the Presidential Campaign.

R. W. Lesley, president American Cement Co., Philadelphia: "With the present outlook for crops and general money conditions, it would appear to me that business this year should be equal to or as large as that of 1902. Of course, so far as our own industry is concerned, labor strikes may interfere materially with construction this year and postpone until the fall many building operations that would otherwise have gone on. In building circles a presidential campaign is always considered a detrimental element. This may interfere with large construction in 1904."

Gauged by Southern Coal Conditions.

Hywel Davies, vice-president Main Jellico Mountain Coal Co., Incorporated, of Louisville, Ky., Kenesha, Ky.: "During a residence and direct association with the mining interests of Kentucky and Tennessee for the last eighteen years, I have noted that Southern interests are more slowly affected in conditions than Eastern and Northern interests. Let the wave be adversity or prosperity, it takes three to twelve months to reach or cover all our Southern country from its initiation in the East. Thus the panic of 1893 was felt more severely by the Southern mining interests in 1894 than in 1893. The prosperity of 1900 did not materialize, so far as Southern mines were concerned, until 1901-1902; that is, there was no material advance in the price of coal until the winter of 1902. There has been a very gradual improvement in demand since 1898, but at no time has there been such a demand or such prices during the spring months as now prevail. I can furnish no better evidence of this condition

than that furnished by the enclosed clipping (referring to a 10 per cent. advance in wages), which will be better appreciated when it is understood that all mines making this voluntary advance are under contract until September 1, 1903, and there was neither a demand for an advance nor any labor trouble to dictate such a policy. The advance was paid as a matter of equity and in appreciation of the integrity of contract which the Southern branches of the United Mine Workers of America have specially maintained as one of their cardinal principles. There are other reasons why we do not expect a radical or sudden reaction in the coal trade:

"1. The limitation of the railroad facilities in Kentucky and Tennessee, which does not exceed 60 per cent. of the capacity of present development, nor the actual wants of the railroads, factories and tributary consumers.

"2. The continued prosperity of the iron business practically absorbs the output of Alabama, in conjunction with a growing trade South and Southwest, thus reducing competition with Kentucky and Tennessee mines. A threatened invasion of the Carolinas by the Virginia and West Virginia fields has been largely dropped on account of a more remunerative Northwestern and Eastern market, as well as a growing export trade.

"3. The multiplying of locomotives, factories and buildings of every description, coupled with a condition of prosperity that increases the purchasing power of the Southern community at large, insures a healthy demand to the full capacity of present mines. In fact, the demand is even now greater than the supply, as reflected in a higher summer market than known during the last ten years.

"We are, therefore, justified in taking a very optimistic view of the coal trade, so far as the Kentucky and Tennessee districts are concerned, during the coming season of 1903 and ending March 31, 1904. Some of the conditions mentioned as present assurance of the mining prosperity may be partly removed in 1904. Thus it is estimated that the new mining operations in Kentucky and Tennessee will be sufficiently developed to increase tonnage of the two States from 10,500,000 in 1902 to 12,500,000 in 1904. A slump in the iron market would throw the surplus of Alabama into competition with us in Tennessee, Georgia and the Carolinas, in addition to that of West Virginia and Virginia. These are possibilities for season 1904-5. The momentum given by present prosperity will carry the Southern coal trade on the greatest tidal wave of demand and prices known in our history during 1903."

Impressed by Labor Conditions.

The Raymond Bros. Impact Pulverizer Co., Chicago: "As our line of business is special, we are not in a position to say what the general conditions throughout the country are. The existing conditions of unrest in the labor field cannot but impress us. Barring this, we have every reason to look forward to a continuance of the activity and prosperity which we are now enjoying."

No Fear of Less Activity.

Tupelo Tank Co., Mobile, Ala.: "We find that since we have established our business here in Mobile it has exceeded our most sanguine expectations. We have orders now on hand that will keep us busy for the next three months, and with others in view we are in a position to have enough work to carry us to the end of the year. We find that the cypress lumber has outgrown the supply of cypress, and we have hunted for another wood to take its place. We find on investigation through the States of Ala-

bama and Mississippi that tupelo is practically as good as cypress and will last a life long (and how much longer would anybody want a tank to last?). We have seen water troughs made of tupelo near here that have been in use for forty years, and they have no sign of decay other than the tear and wear of the stock drinking out of them and the weather beating them. It is tasteless for water storage. Tanks made of tupelo are far superior to any other known wood for the storage of crude or refined oil. We also find that tanks made of virgin yellow pine when it has not been boxed for turpentine (hence all the pitch and rosin remains in the wood) are the most durable tanks, and are fit for any place where the tank is not used for drinking purposes, as pitch in the pine will always make the water taste of turpentine. For use in dyehouse, bleacheries, vinegar and pickle establishments, chemical works, fertilizer factories, or any place where acids are used, the pine tank will outlast any other known wood. Virgin pine cannot be secured unless the tank factory is in the heart of the pine country, where the material can be selected from saw-mills that do not saw timber which has been turpentine. There is a pine tank used by the Southern Railway Co. which has been in use for twenty years and is in a good condition yet. We made a pine tank out of what we consider very poor quality for a party in Hinton, Va., ten or twelve years ago, and it has never leaked a drop and is in perfect condition yet. In digging the sewers in Mobile, February, 1902, at the corner of Water and Government streets, a pine water main was dug up bored out of a green pine log. The sap on the log exceeded three inches on each side of the bore. The hole bored for water main was five and one-half inches in diameter. The log is as good and as sound as the day it was buried. It has been under ground for sixty or sixty-five years, and even the bark on the log is in perfect preservation. A section of this log can be found in our office at present. We also make tanks of oak, and everybody knows the value of oak for stock, and no other wood can be substituted for the manufacture of barrels for wine, cider or whiskey and for shipping of mineral waters. The oak, being tasteless, makes it better adapted for such purposes. The reason it is not used more extensively is because of its scarcity, but we live in the midst of the oak country, and can very easily make vats, cisterns, etc., out of oak timber at very reasonable prices. We have no fear of less activity in our business, and, indeed, so far as we are concerned, think that as soon as the Panama canal is commenced we will have much more work than we can do unless we can increase our facilities greatly. We have moved our tank business from Florida to Mobile, and are preparing to build an addition to our works to install all the machinery from our Florida plant and thereby more than double our facilities."

In World Markets.

Charles E. Carpenter, general manager E. F. Houghton & Co., Philadelphia: "There is every indication of continued activity in the industrial world, but there are no such indications of profitable activity continuing for any considerable period. Some of us who have opened branch houses throughout the world have noticed that we have usually been welcomed by the purchasers, because our goods would become competitive, and by such competition reduce the prices over former sources of supply, and we have then noticed that the first year or so these localities have been very prosperous, particularly if we have known a thing or

two that our competitors in these localities had not appreciated, but there has always been a reaction, and after this reaction once begins we find that things are not so rosy with these branches. Now, the business of the nation, in our opinion, will be upon the same basis. We have gone into the markets of the world suddenly; we have had all the advantages of the economists of our country, particularly high-class labor and our machinery. The country has been full of foreigners studying our methods, agitating our labor and buying our machinery, and the inevitable result will be that the United States will only retain their fair share of the trade. It is true that they have never had that fair share, and perhaps that which we already have is not that fair share, but we cannot go on continuing to increase our export trade in any such proportions as we have; and, again, if this foreign competition brings the price of our labor down in this country, that will reduce the purchasing power of the great money-spending class of our home market. Our advice to those who have a good business at the present time is to be very careful as to how they put their profits in bricks, mortar and machinery. We believe in healthy legitimate increase, but this doubling and tripling the sizes of industrial plants is, in our opinion, speculative as to the future."

Classed With Optimists.

Brobston, Fendig & Co., real estate, Brunswick, Ga.: "Locally the present business conditions are fine, and the outlook is most glowing for the future. Work has begun on the Mohawk Valley Steel & Wire Co.'s plant, and all Brunswick is looking to the future in confident expectancy of great things. Locally, business in all lines has been on the steady increase for several years past, but promises now to take on leap and bounds. Viewing the general situation, we can see only encouragement for the South—turpentine and lumber, cotton and rice, all bringing high prices; every well-managed manufacture doing all it can do; our banks with handsome deposits of our own money. Producing those things which the world needs, and producing them at a minimum cost throughout its entire territory, the South is prosperous and should continue prosperous for a long period of time. The panic of 1893 hit the South hard, just as it hit the West—a staggering blow—but we have recovered, and while the financier of fifteen years ago may have made wild speculations, those that are at the helm now have learned well the lesson of caution, and they are not speculating now, but have paid off the mortgages or bought in the property of panic days at less than it was mortgaged for. They own it now, and it is paid for, and they have money in the bank. A money panic now would not affect the South as it did in the days of 1893. Besides this, with the balance of trade in our favor to the tune of more than \$1,000,000 per day and a healthy demand at home, we see no reason to apprehend anything but good times. We rather look for the fever of Wall street to die down and money go more and more into the development of legitimate trade. Labor trouble will not disturb conditions in the South to the same extent as in the North, and the organization of new industries, with up-to-date machinery, is also being done in the light of a more intelligent management of labor. Everything conspires to make the future look bright and happy for the South. You can certainly class us among those who take an optimistic view of the entire situation."

Toolmakers All Busy.

Mell R. Wilkinson, secretary and treasurer E. Van Winkle Gun & Machine

Works, Atlanta, Ga.: "With good crops we look for an unusually prosperous year. Our company has been installing a number of new tools, and we have found the toolmakers all busy and well sold ahead. 1902 was probably the busiest year that cottonseed-oil-mill-machinery manufacturers have had, yet, judging from the number of contracts that we now have, and assuming that other manufacturers are doing as well as we, 1903 will easily equal or surpass the prosperous year of 1902. We find collections reasonably good for this season of the year. The railroads are improving their service, and with money getting easier we see nothing to prevent good times continuing."

Trade Conditions Satisfactory.

C. L. Berger & Sons, Boston, Mass.: "We have found trade conditions very satisfactory, and the demand has exceeded the supply. We believe the great activity and prosperity which this country has enjoyed for the past ten years will continue for a few years longer."

Lumber Mills All Busy.

J. P. Stetson, president Stetson Lumber Co., Macon, Ga.: "Existing conditions in the lumber trade indicate much prosperity, and it is our impression that such will be the case for some time to come. The mills generally report orders enough to keep them running for some time, and as a rule are not taking orders for shipments too far in advance. They report that inquiries are plentiful and are coming from sources that will use yellow pine as long as there is any to use. Prices are being well maintained on standard orders, but for better grade and larger material they have advanced some. We do not think there will be much advance, if any, in prices, as the mills seem well satisfied with present prices. Looking at conditions generally in all lines of business, while the crops in this section are late, everyone seems to be confident that it is only a question of a short time before they will be caught up, and everything will be moving along smoothly."

Booking Many Contracts.

S. Forry Laucks, vice-president and general manager York Safe & Lock Co., York, Pa.: "We are exceptionally busy in every department of our works, and our April booking of contracts is unprecedented, exceeding in volume the sales of any previous month in the history of our business, and there seems to be no reasonable prospect of a falling off in this condition in the early future; in fact, all indications from our standpoint seem to point toward greater activities rather than less."

Unless There Is Overproduction.

Putnam A. Bates, assistant secretary Crocker-Wheeler Company, Ampere, N. J.: "There is no question but that electrical machines, being money-savers, will increase in demand whether the times be good or bad, and this fact probably accounts in a large measure for our works being crowded to their utmost. Nevertheless, we find indications all through the United States of increased prosperity in practically every industrial line, and, as a rule, the plans which are being made for increased manufacturing are, we should say, laid out on a conservative basis. So long as this policy is followed and manufacturers are careful not to overreach there is no reason why business should not continue active. With the manufacturers themselves rests a great deal of the responsibility for keeping up the prosperity of the country. The existing conditions seem to us to be excellent, and the indications for future business are such that it is safe to count on a continuance of great activity and prosperity

for some time to come. Manufacturers should be careful not to cause an overproduction in their various lines, and should guard against undertaking greater tasks than they are able to successfully handle."

Business for Manufacturers.

Monerief Furnace & Foundry Co., Atlanta, Ga.: "We consider the outlook much better than it was at this time last year. We have quite a number of very good orders, and we think the prospects for business much better than at this time a year ago. As far as we are able to judge, there is no reason to believe but what manufacturers will have all they can possibly take care of during the present year."

Largely on a Cash Basis.

Gen. Willard Warner, Chattanooga, Tenn.: "I see no signs of lessening activity in industrial matters, nor of smaller consumption at home or abroad. There is little speculation, no great inflation of values in any species of property and no undue extension of credit. In fifty years of business experience I have never known the business of the country so largely conducted on a cash basis. Bad crops may cripple us, but otherwise I see no cloud on the financial horizon."

In a Banner Year.

E. G. Felthousen, proprietor Acme Steel & Malleable Iron Works, Buffalo, N. Y.: "Up to the present time this year has been our banner year. We never before had so much business offered to us without solicitation, and, judging from all surface indications, we feel confident that the balance of the year at least will see no decided let-up in general manufacturing business."

The Outlook Is Brighter.

G. L. Stuebner Iron Works, Long Island City, N. Y.: "Business in our line is very brisk at present and the outlook for the future seems to be brighter than the past."

The South More Prosperous Than Ever Before.

Hugh MacRae & Co., bankers, Wilmington, N. C.: "We are of the opinion that the South is in a more prosperous condition at the present time than it has ever been, and the indications for future business and for a continuation of active development are very bright. There is certainly more money in the South among the farmers and laborers and small merchants than we have ever known before. This is due in part to the fact that the large cotton crops of the last few years have brought high prices, and the net profits from these crops alone are so large as to be almost incredible when computed. If you will estimate the part the cotton crop has played in the favorable trade balances of the United States during the past six or eight months it will be quickly apparent how important this one factor is. The industrial development of the South has proceeded more rapidly each year as capital was accumulated, and as this capital has, in turn, all been profitably employed, the development has been in a steadily-increasing ratio, until now it is getting to be of such magnitude as to attract general attention. As you are well aware, the South is rapidly becoming less dependent on one crop, and in many sections there are special crops which yield far more profit per acre than cotton does. Take, for instance, the raising of early fruits and vegetables in the States along the South Atlantic seaboard—Virginia, North Carolina, South Carolina, Georgia and Florida. This has within a few years grown into fine proportions, and is today the chief source of

wealth to the parts of these States near the coast, and nowhere in the United States can better profits be derived from any branch of agriculture than is obtained in these sections. From nearby conditions, therefore, we can only say that the outlook is very bright, and we see nothing to prevent continued prosperity except a lack of some financial legislation which will give a safe and elastic currency suitable to the needs of the country. Until this is secured certain classes of business will undoubtedly suffer unnecessarily at certain periods every year. But with one or two more years of good crops and good markets the farmers will be in a position to own enough currency—perhaps even now they are in that position—where this financial stringency will not directly affect them as seriously as it will other industries."

All That Could Be Desired.

Richardson & Co., cut rails, Pittsburg, Pa.: "Present business conditions are prosperous, and all that could be desired. The crest of the wave of the phenomenal prosperity we have enjoyed for the past few years, I think, has already been past, which is probably more of an advantage than a disadvantage. Natural conditions are always better than phenomenal. Still, this phenomenal prosperity perhaps was more apparent than real, and there are thousands of people who have made money at the expense of each other. I mean by that stocks, real estate, etc., have been sold and are selling at prices that discount the earnings and appreciation for years to come. This, I think, is an existing condition not favorable to the future. Future earnings and future increase of values should go to the purchaser, and not to the seller. If one buys at a price that he must wait for years for the stock to be worth that value, his money is not well invested, and consequently, in being so tied up, prevents new investments, thereby curtailing so much trade or business. True, the man that sells is wealthier, but it is not productive wealth, but apparent, so far as the whole country is concerned. As far as I can see, this condition, formation of trusts, mergers and colossal combinations are the only things that menace future prosperity."

FIXING THE STANDARDS.

Organization of Builders of Refrigerating Machinery.

At the meeting last month of ice and refrigerating machine builders at Cincinnati nearly all manufacturers of machinery of that character were represented in person or by proxy. In conference with representatives of the ice-can manufacturers, who were present by invitation, standard sizes and details of construction of ice cans were adopted.

The standard system of flanges adopted by the American Society of Mechanical Engineers and the Associated Steam and Water Fittings Manufacturers was approved and recommended for general adoption by the ice-machine trade for all brine, water and steam connections. A standard of capacity per ton of refrigeration for ammonia machines was adopted, and it is expected that the adoption of this standard will operate to obviate the uncertainty which has existed in the past as to just what was meant by the rated capacity of the different machines, and that the establishing of a legal standard of capacity will be to the advantage of all concerned.

The meeting was not called for the purpose of advancing or otherwise regulating prices or of in any way combining interests. Certain minor abuses connected with the selling end of the busi-

ness were discussed and some recommendations made for their correction.

A permanent organization was effected and Louis Dolle, Esq., of Cincinnati was elected permanent chairman and Mr. W. P. Eagan of Chicago, secretary.

Meetings will be held from time to time for the purpose of continuing the work already begun. It is confidently expected that at the next meeting the few companies not already affiliated with the organization will be represented.

Opportunities at Lumberton.

Mr. Robert Edward Lee of Lumberton, N. C., writes to the Manufacturers' Record as follows:

"This town has recently voted \$10,000 bonds for an electric-light plant. It has a first-class water and sewerage system, and has organized a stock company of \$20,000 for the purpose of building an ice and cold-storage plant. These are industries and improvements which have been brought about within the past few months. There never has been in the history of Lumberton so much concerted action among our business men. Everything seems to have a tendency to make some improvement.

"There is a demand here for a cottonseed-oil mill. The surrounding section will amply supply an industry of this kind. This is right in the midst of a fine cotton-growing section, and Lumberton is a large cotton market. Cotton at this time is bringing on this market ten cents. I will take pleasure in aiding any party or parties who desire to meet the business men of this town in taking you over the situation if you will visit us. I will give you any desired information along this line if you are interested in such a plant or desire to invest, say \$20,000, which will be the necessary amount to raise.

"This town possesses many local conveniences for a plant of this kind, and parties will find a perfect welcome here among our business men should they desire to locate their capital. There are two railways running into this town and plenty of country roads leading from all sections of the county at large, this being the county-seat."

For Alabama's Advancement.

[Special Cor. Manufacturers' Record.]
Huntsville, Ala., May 5.

The Alabama Commercial and Industrial Association, Chas. P. Lane of Huntsville, president, will probably hold its annual session in Mobile in July. Hon. R. E. Pettus of this city has suggested the following subjects for discussion at the forthcoming meeting: "How to Secure a Creditable Exhibit at the St. Louis Exposition," "Technical Education," "The Education of the Poor White Boy in the State of Alabama," and "Oil Development in the State of Alabama."

The Secrets of Canning. Published by John Murphy Company, Baltimore, Md.

For those engaged or purposing to embark in the canning business, the "Secrets of Canning" is a work that will be a valuable assistant. It gives estimates of amount and cost of plants of various capacities; remarks on machinery, number of hands needed, etc.; tells what food products are best adapted for canning, and, in short, contains a large amount of detailed information bearing upon all branches of the business. A prospectus giving further information as to its contents may be had from the publishers.

The sales in the Joplin (Mo.) district during the week ended May 2 were 10,214,510 pounds of zinc ore and 1,290,650 pounds of lead ore, valued in the aggregate at \$222,266.

GOOD-ROADS' CONVENTION IN ST. LOUIS.

By COL. J. B. KILLEBREW.

[Written for the Manufacturers' Record.]

No more successful convention was ever held in the interest of any industrial movement than the good-roads' convention that was held in St. Louis from April 27th to the 29th, inclusive. In the number and intelligence of its delegates, in its enthusiasm and working capacity, in its unanimity and singleness of purpose, in the number of able speakers and freedom from partisan or political influences, it was seldom if ever equaled.

Two thousand delegates from nearly every State and Territory in the Union attended the convention. From the first day to the last the most dominating idea was the necessity of government aid in the construction of rural routes—government aid to be conditioned upon an equal amount of local aid as set forth in the Brownlow bill. All the speakers, with the exception of one or two, dwelt upon this idea, and the thundering applause that followed each speaker left no room for doubt as to the sentiment of the convention on this point. Not less convincing was the ominous silence or courteous frigidity that followed the speakers that did not give their full support to this pre-dominating idea.

The best evidence, however, was in the adoption of the declaration of principles and resolutions on the last day of the meeting. There was not a dissenting voice in that large assemblage. The declaration of principles as set forth asserted that the building of good roads in the United States is now of paramount importance to national prosperity and commercial supremacy; that the harmonious co-operation of township, county, State and national governments is needed in furtherance of this end; that though the appropriations hitherto made by Congress for the improvement of the rivers and harbors were beneficent and commendable, yet the time has come when the agricultural districts should be assisted in the matter of building of highways, so that the benefits of the free-mail delivery may be extended and thus promote a higher order of citizenship and also meet the ever-growing necessities of the great agricultural interests of the country, upon which its prosperity and growth depend.

The establishment throughout the United States of a complete and perfect organization for this purpose was recommended, and the delegates assembled were made representatives of the national organization of the Good-Roads' Association. The work of the office of the public-road inquiries was endorsed, and the sense of the convention was that its opportunities should be enlarged and its usefulness extended by a larger appropriation.

The principle of State and county co-operation was commended, and it was more than once emphasized that it is as much the duty of the general government to assist in the building of highways as it is to improve the rivers and harbors.

The resolution favoring national aid is to be presented to the Congress of the United States by a committee composed of one member from each State, to be selected by the secretary of the National Good-Roads' Association. The building of the Memorial road from Monticello to the University of Virginia in honor of Thomas Jefferson, who signed the first bill for the construction of a national highway on March 29, 1806, was unanimously approved and endorsed by the convention.

Among the most distinguished speakers at the convention were President Roose-

velt, Wm. J. Bryan, Senator Latimer of South Carolina and Governor Cummins of Iowa. Mr. Roosevelt and Mr. Bryan both spoke of the necessity of building better highways for the nation, and though neither committed himself to the proposition of advocating government aid, yet the inference was clear that both would favor such expenditures. Senator Latimer made a strong, earnest and unanswerable argument in favor of government aid. His words fell upon a highly-appreciative audience, and the walls of Odean Hall resounded with acclamations at intervals throughout his address, and at its close the applause continued for several minutes. There will be no more earnest worker for good roads in the next Congress than Senator Latimer.

The speech of Governor Cummins was disappointing to the Iowa delegates. Without an exception they were in favor of national aid, but Governor Cummins, while not opposing such congressional appropriations, thought the wisdom of such a policy at least problematical and its propriety doubtful.

The President made some goods points. Among other things, he said:

"It is the habit of road-building that gives to a people permanent greatness.

"The development of the iron road has been all that one could wish, but it is mere presumption to consider good railways as substitutes for good highways.

"We want to see cities built up, but not at the expense of the country districts.

"If the winter means to the average farmer a long line of liquid morasses through which he must painfully force his team if bent on business, and through which he must wade or swim if bent on pleasure; if an ordinary rainstorm means that the farmer's boy or girl cannot use their bicycles, you have got to expect that those who live in the rural districts will not find farm life attractive.

"We should all encourage any check to the unhealthy flow from the country to the city."

This movement in favor of government aid is gathering strength day by day. It will reach such proportions by the meeting of the next Congress that no congressman who has any regard for his own popularity will be able to resist it. Several conversions occurred during this national convention. Several who came prepared to resist the movement were astonished at the depth and unanimity of sentiment among the delegates of all political parties. The impulse is gathering strength, and he who would not be swept away must move with it.

When the proposition for government co-operation in the building of highways was first broached its wisdom only touched a few minds that rose high above others in economic thought. But with the movement of time its wise provisions were caught and reflected from the lowly hills and deep valleys of thought until now the whole country is brightened with the beneficence of its purposes, except in the case of a few politicians who are so wrapt in the obscuration of the fogs of their own greatness, or it may be vanity, that no light, however bright, is able to pierce the profound darkness of their prejudiced minds.

The general land office has issued a patent to Florida for 3,000,000 acres of land in the Everglades along the south of Lake Okechobee. The issue of this patent settles in favor of the State a controversy which has stood for twenty-three years.

STIMULATING PRODUCTION.

Oil Prospects in the Kentucky-Tennessee Fields.

[Special Cor. Manufacturers' Record.]
Barboursville, Ky., May 5.

The most encouraging thing that has occurred in the Kentucky-Tennessee oil fields for some time past is the advance in the price of petroleum, and it is thought that the recent advance in the price is only a beginning. Now that conditions are becoming more favorable for operations in the various fields the Standard has begun to stimulate the production, and in view of the fact that the oil reserves are constantly dwindling as they are drawn upon to supply the deficiency in production, it is believed that in order to encourage production the price will be advanced to a figure never before attained. By the beginning of fall many producers express it as their opinion that Kentucky-Tennessee oil will command a price almost twice as high as it is now quoted, and the same conditions will apply to all other fields that produce the illuminating grade.

Although oil from this section does not command the price that is paid for the Pennsylvania product, it is thought that it will be put on an equal basis when the pipe line leading from Tennessee to the Eastern refineries is put into operation. The recent advance raises the price of Kentucky and Tennessee oil two cents on the barrel, while at the same time the Pennsylvania grades are advanced three cents, but this is no doubt caused by the fact that the Pennsylvania fields are more in need of a stimulant, as the production has been gradually falling off, it is understood.

Barboursville and Somerset oil, light, is now bringing ninety-seven cents a barrel, and the same figure is quoted on Lacy, the Tennessee product, in which there is no difference. The heavy grade is now quoted at fifty-seven cents. This is the output of the Bath-Rowan fields, in the central development of Kentucky, and of the Wages sand formation of Knox county, in the southeastern development. The heavy oil is a high-grade lubricant, but is not very suitable for illuminating purposes. The price paid by the Standard is very much below what the oil would bring if it could be placed on the market independently, but this being impossible, the producers take the price the Standard offers. The shipping of this grade of oil has been somewhat of a problem since its production began, the pipe-line company not wishing to mix it with the lighter grades. This problem has now been solved in the Knox fields by the Standard contracting with the Louisville & Nashville Railroad to take the output of the Wages sand. This oil will now be run through a new pipe line, which is already constructed, to a point on the Louisville & Nashville road, where it will be loaded into tank cars and shipped to St. Louis and other cities. The output is as yet limited, and the sand, being found at a depth of but 200 feet, may not prove lasting. What disposition will be made of the Bath-Rowan output is not yet known. The Standard is foremost among the producers in that field.

Field activity throughout the various developments is now on the increase; new companies are being formed and new wells commenced. The various railroads extending through the different fields are shipping a larger amount of drilling machinery, and the industrial awakening is extending to all sections of the State. In some of the new fields that have been entered this spring a production has already been obtained, while in other new fields work has not progressed long enough to bring results. There is a

growing tendency on the part of local people to take up the work of boring for oil, and this is fully attested to by the large number of local companies that are constantly being formed to carry on the work.

The center of activity is now in the southern and southeastern developments of Kentucky, while work in the central fields is gradually spreading out over a wider area, and this is in some measure detracting the interest from the older developments. In Tennessee work has not been active for some time, but operations will soon be on the increase with the advent of new companies.

April operations in the southern and southeastern fields resulted in considerably extending the older fields and increasing the production in the new ones. In Wayne county the Cooper field is constantly being pushed to the front, and it is now producing more oil than all other fields of the two States combined. About thirty wells have been completed in Wayne county during the past month, and during May work promises to be still more active. Operations up to the present have resulted in four distinct developments—Cooper, Slickford, Sunnybrook and Sperrier. The production in the latter three sections has greatly fallen off during the past few months. Adjoining Wayne, in Pulaski county, considerable work is now being done by one company, and this work may result in a new field, although a number of dry holes and just one producer have been drilled in.

In Cumberland county a large number of wells are going down at present, but the field has not been sufficiently tested to demonstrate its worth. No provisions have been made for a pipe-line extension to the fields of Cumberland, but if a good production is obtained the line will no doubt be forthcoming. Farther to the west, in Barren county, an old field is beginning to attract renewed interest, and within the past few weeks some West Virginia capitalists have secured control of some old wells and have put them to producing, after cleaning them out. Drilling machinery has also been moved into the field and the work of developing will soon commence. The output of the field is run through an independent pipe line and loaded into tank cars and shipped to the refineries. The Standard controls the production.

A new development has recently been made in Whitley county, and this will probably prove an extension of the Knox-county field. A large number of drilling rigs have been shipped into Whitley during the past few weeks, and the work of developing is progressing at a rapid rate. In Knox county about thirty wells were completed during May, but work is not now so active. The Whitley fields are, to some extent, drawing away the interest.

The Standard will this summer take a large part in the producing of crude oil. For a number of years it has been securing leases, and now has a vast acreage in Kentucky and Tennessee. A number of independent companies have also been bought out, and the Standard is working under the name of the New Dominion Oil Co. This week ten drilling machines were shipped into Cumberland county, with which to commence operations, and this will greatly enliven activity in that section.

The pipe line extending from the Bob's Bar development, in Tennessee, across Eastern Kentucky to the Seaboard line in West Virginia, is understood to be completed, and the various branches which constitute the Cumberland Pipe Line system are being gotten ready for a test.

W. S. HUDSON.

SOUTHERN GOLD-MINING.**Recent Developments in Several States.**

In a review of recent developments in Southern gold mining and smelting the Southern Field, published by the Industrial and immigration department of the Southern Railway, says:

"Recently an old Western mining engineer, now located in the South, made a tour of some of the mines along the line of the Southern Railway and furnished the following report, which will doubtless prove of interest to many of our readers. He writes as follows:

"Why not give the public a few cold facts about the gold and copper mines of the South, which have been and are being successfully developed and operated today. This 'ante-bellum' mining history is all right, but it does not attract capital from the North and West, where, by the way, the South must and is today getting its capital for the large operations now being carried on.

"There have been more mines developed and reopened in the past eight months than in the previous ten years. This mining is not confined to any particular locality, but extends along the Appalachian mineral belt from Virginia to Alabama. For want of space we will mention only the most important properties that are meeting with success, all of which are located along the Southern Railway.

"At the extreme northern border is the Virginia copper district, with six mines working. The Person Consolidated Gold & Copper Mines Co., Mr. L. N. White of Denver, manager, is operating a concentrating mill of seventy-five tons daily capacity. The company has followed the much-quoted adage and mined thousands of tons of ore before building its mill. This company is meeting with more than average success. The Blue Wing mine, owned by John T. Williams of New York, with Mr. Hart, general manager, is shipping one car of bornite and glance copper ore per week that will average 12 per cent. copper. A large concentrating mill to handle the low-grade ores is now being constructed. The Holloway mine is an old producer, and is shipping regularly to the smelter.

"The Virginia Copper Co., Mr. Davis, manager; the Seaboard Copper Co., Mr. A. W. Tucker in charge, and the Danville & Virginina Copper Mining Co., J. H. Henderson of Danville, Va., general manager, all have shipping ore and are doing substantial and extensive development work.

"Coming south, sixteen miles from High Point is located the famous old Pentress mine. Dr. Ledouse of New York city is president of the company; Mr. Greene, manager at the mine.

"This company has sufficient funds in hand to erect and equip a large concentrating plant to work the low-grade ores. The main working shaft is 400 feet deep, and with the development in drifts it should make a splendid future showing. The Deep River Gold Mining Co., owned by M. A. Popkess and R. H. Thomas, is working the Deep River and Henry Johnson mines near High Point, N. C. The Briar Hill mine is being developed by Messrs. Garther & De Rudio, both Western mining men. Mr. M. A. Popkess and associates recently purchased the well-known Oak Hill mine, two miles northwest of High Point. The vein on this property is from six to twelve feet in width, carrying gold and copper values. A five-stamp mill is on the property, which will be increased to twenty stamps, using jigs, classifiers and Wilfly concentrators. About one-third of the mine run

will be shipped to the smelter direct; the balance of the vein matter will go through jigs and stamps.

"Mr. F. E. Dudley is in charge of the Lawyer mine, sixteen miles distant from High Point, being owned by the Stillwater Gold Mining Co., composed of Minnesota capitalists. They are putting in a large cyanide plant on this property and also a large 500-ton-capacity plant on the Pine Hill mine, twenty miles south.

"The Iola Gold Mining Co., owned and managed by Capt. Milton Jones, is running ten stamps. This property is located two miles from Candor, N. C. It has extensive development work done, and has produced \$75,000 in gold in the past eight months, and is producing regularly about \$10,000 per month. The Montgomery Gold Mining Co., Mr. Geo. R. Gaither, president, of Baltimore, is operating ten stamps in same district with equally as good results. Mr. J. Currie, also D. C. Stanback and others, are developing mines near by. Mr. Geo. R. Gaither is also reopening the old Russell mine. Mr. Allen of Chicago, with Mr. H. C. Coppelmer in charge, is operating a five-stamp mill on the free-gold ores above water-level on the adjoining property.

"At Cid, N. C., Capt. Samuel S. W. Brown is in charge of the Emanc mine, owned by the Hercules Gold Mining Co. The company is just completing a large concentrating mill, which should put the property on a paying basis.

"The properties at Gold Hill are meeting with success and are giving employment to upwards of 200 miners. An English company has recently purchased a gold and copper property located near Concord, N. C., consideration being \$42,000.

"The Miami Copper Mining Co. is mining extensively with electric drills. Smith & Clark of Atlanta, Ga., are owners of the Cruz mine, having a high-grade copper ore, which was shipped to the smelter at Oakdale, Ga., nine miles northwest of Atlanta, on the Southern Railway, now owned by the Piedmont Smelting Co. This plant is the only custom smelter located on the Southern mineral belt, and is prepared to handle upwards of 200 tons daily, thereby assuring a ready market for all ores extracted in development, which is a great advantage to all operators in opening up their property.

"The Summerville mine, located near Charlotte, N. C., is being operated under the management of Mr. Ames. The Hale mine at Kershaw, S. C., is keeping up her record of the past fifteen years of \$10,000 gold per month. The Seminole Mining Co. is running its lead-smelting plant on a paying basis.

"Last, but not least, Mr. Gill L. Peyton of Salt Lake City, who became prominent and well known in mining circles by erecting the first cyanide mill in the United States at the famous Mercur mine, to work ore as it comes from the mine, which property has paid over \$3,500,000 in dividends since 1893, is president of the Colossus Gold Mining Co., which is now erecting a 600-ton cyanide plant, being built by the Mecklenburg Iron Works, Charlotte, N. C., on the old Howie mine, twenty-three miles southeast of Charlotte, N. C., to treat about 30,000 tons of tailings, which contain about \$6 in gold values, and the enormous old dumps, which are estimated to give a full capacity of plant for the next two years. The vein on this property is very large, and an estimate of ore above water-level which can be handled profitably by the above-mentioned process will keep the plant in operation for years to come. Recent deep development has ver-

ified the fact that in most mines the ore changes at water-level from an oxide to a sulphide, necessitating the erection of concentrating mills to work the low-grade ores, the concentrates, together with the high-grade ores from the mines, going to the smelter for treatment."

Copper-Mining in Carolina.**Editor Manufacturers' Record:**

Negotiations which had been pending for twenty-three months between the Carolina Copper Co. of Detroit and the Garretson Southern Furnace Co. of Cincinnati were closed on Monday last in Detroit. Under the terms of the contract the Carolina Copper Co. secures the right to erect and operate a Garretson pyritic smelter on its mine in Jackson county, North Carolina. The deal is perhaps one of the most important smelter deals, if not the most important, ever closed in Detroit. The Garretson Southern Furnace Co. has just closed a contract to build a large smelter for the Tennessee Copper Co. at Copper Hill, Tenn. The principle of the Garretson smelter is that of combining the roasting, smelting and converting processes into one operation, taking the ore just as it comes from the mine and turning it into commercial copper within five hours. It costs the Tennessee Copper Co. nine and one-fifth cents per pound to produce its copper under the present methods employed by them. Under the Garretson method the most careful tests have convinced the Tennessee Copper Co. that it can produce copper for a maximum of four cents per pound. The Garretson Furnace Co., of which Ralph Bagaley of Pittsburg and Judge Reed of Pittsburg, partner of Attorney-General Knox and private counsel to Andrew Carnegie, are officers, is now building at Butte, Mont., Garretson furnaces to have a capacity, it is understood, for smelting 5000 tons of ore per day of twenty-four hours. H. C. Bellingier, chief metallurgist for F. Augustus Heinze, has declared the furnace to be "a revelation and a revolution." The Carolina Copper Co. property is one of the mines which Southerners were working when the Civil War broke out. It was secured by Hugh M. McCormick two years ago and has been pronounced by several copper-mining engineers to be one of the most attractive copper mines in the United States. The district in which the Carolina Copper Co.'s mine is situated is under rapid development, as the largest nickle mine in the United States is believed to be there, and the largest kaolin mine in the world, known as the Harris Clay Co., is also there. There are several large copper properties in the immediate district now being developed. The country seems to possess every requisite for a great mining district—abundant water and timber, cheap labor, fine climate and the shortest haul to market of any mining district in the United States.

HUGH M. MCCORMICK.

Detroit, Mich.

Mr. Chupes and Miss Jenny—The Life Story of Two Robins. By Effie Bignell. Publisher, the Baker & Taylor Company, Philadelphia. Price \$1.

This is a very clever presentation of the careers in captivity of two of the most interesting members of the bird family. By chance they became the involuntary companions of men and women, but developed such a gentle affection for their gentle guardian that they were unwilling to leave her for a life of liberty. This close association gave an opportunity for studying the traits of robins, and the description of them in narrative form is a distinct addition to the nature-books now become so popular.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

DENISON TO PUEBLO.**Colorado, Oklahoma & Texas Railway Plan Described.**

Concerning the Colorado, Oklahoma & Texas Railway Co., recently chartered at Guthrie, Okla., to build from Goodwin, Okla., to Denison, Texas, with the understanding that it would extend northwest into Colorado, Mr. George Sturgeon, third vice-president, writes from Hobart, Okla., to the Manufacturers' Record as follows:

"The Colorado, Oklahoma & Texas Railway Co.'s line of road will be built from Denison, Texas, to Pueblo, Col., running through the southwestern portion of the Chickasaw Nation through the counties of Comanche, Kiowa, Washita and Roger Mills, in Oklahoma, and Hemphill and Ochiltree counties, in the Panhandle of Texas, also Beaver county, in Oklahoma, thence to Pueblo through the southeastern portion of Colorado.

"The length of the road will approximately be 468 miles. This route will be almost an air line from Denison to Pueblo, and will shorten the distance between the Gulf ports and Colorado centers about 150 miles. The country through which the road will pass is a cotton and cereal-producing country. Our chief engineer is E. E. Colby, late of Springfield, Mo."

The incorporators of the company are G. A. Brown of Denison, Texas; J. Cramer of Chicago, Ill.; E. E. Colby of Springfield, Mo.; George Sturgeon of Hobart, Okla., and Walter Hendricks of Chickasha, I. T. The latter, however, writes the Manufacturers' Record that he has resigned from the company. He says: "The line they propose to build will occupy new territory, and if built will be the most direct route from Colorado to the port of Galveston."

A report that this line would be a branch of Arthur E. Stilwell's Kansas City, Mexico & Orient Railway is unconfirmed.

TENNESSEE RAILROADS.**The Central Expected to Be Absorbed—Reports of Extensions.**

It is reported from Louisville, Ky., that as a result of the retirement of Mr. Jere Baxter from the presidency of the Tennessee Central Railroad, an opinion prevails in financial and railroad circles that the Southern Railway Co. will secure the eastern division, extending from Harri-man, in the eastern part of Tennessee, to Nashville, and that the western division—from Nashville to Hopkinsville, Ky.—will pass under the control of the Illinois Central Railroad. When the extension from Clarksville, Tenn., to Hopkinsville, Ky., is completed the Tennessee Central will have 300 miles of line. The road, it is understood, is backed by a St. Louis syndicate, in which ex-Gov. David R. Francis is interested. As heretofore stated, J. C. Van Blarcom of St. Louis has succeeded Mr. Baxter as president.

Still another report about the Tennessee Central is that the entire line will probably be absorbed by the St. Louis & San Francisco Railroad Co.

A third rumor concerning the railroad situation in Tennessee is that the Seaboard Air Line will reach Chattanooga over the Chattanooga Southern by building a fourteen-mile extension from the East & West Railroad of Alabama to connect with the Chattanooga Southern at Gadsden. A survey is now being made by the Sea-

board between those points, but Vice-President J. M. Barr writes the Manufacturers' Record that no conclusion has been reached with respect to building this branch.

Still another report from Tennessee is that the Louisville & Nashville Railroad will build an extension to Chattanooga via Ducktown.

ARANSAS PASS DEAL.

'Frisco System Will, It Is Reported, Also Absorb Another Line.

According to reports from Austin, Texas, the San Antonio & Aransas Pass Railroad of the Southern Pacific system will be purchased by the St. Louis & San Francisco Railroad. Another report concerning the matter says that a member of the Southern Pacific executive committee in New York has made the statement that the probable deal with the 'Frisco is not for the entire San Antonio & Aransas Pass line, but for the branch between San Antonio and Kerrville, Texas, fifty-six miles, which would be used by the 'Frisco in extending from Brady to San Antonio. This member of the committee is, however, reported to have admitted the possibility of the sale of the entire line.

The San Antonio & Aransas Pass Railroad consists of 687 miles of line, connecting Houston and San Antonio, with an extension from Yoakum to Waco and another extension from Kennedy which forks at Skidmore, one link running to Rockport and Corpus Christi and another to Alice.

The proposed Vernon, Roswell & El Paso Railway, to run from Vernon, Texas, to El Paso, is reported to be a 'Frisco project. Another report about the 'Frisco is that it will absorb the Ozark & Cherokee Central Railway, which runs from Fayetteville, Ark., to Okmulgee, I. T., 143 miles, and which is building extensions westward into Oklahoma and eastward towards Memphis, Tenn.

THROUGH THE MOUNTAINS.

Coal & Iron Railway Reported to Connect With Chesapeake & Western.

From Harrisonburg, Va., it is reported that work has begun on building a railroad tunnel through the Shenandoah mountain near Dry River Gap, the tunnel having been located by A. A. Chapman, chief engineer. This project is said to mean that the Central Railway of Virginia will build through to connect with the West Virginia Central's Coal & Iron Railway, which for some time has been making surveys in Randolph and Pendleton counties, West Virginia. The Goulds are reported to be behind the project.

The Central Railway of Virginia was chartered about two years ago by the legislature, the incorporators, it is reported, including W. H. Reckard and P. W. and D. C. Reherd, all of Rockingham county, Virginia. They had a survey made from Harrisonburg via Rawley Springs along the Dry River Gap, and now, according to reports, the plan is to build this proposed line from Durbin, W. Va., on the Coal & Iron Railway, through the mountains to connect with the Chesapeake & Western Railway, in which for some time, it has been stated, the Goulds are interested. The final object of this is said to be to reach tide-water on the Chesapeake bay.

Draining Farm Lands.

Concerning the report that the Florida East Coast Railway Co. proposes to drain part of the Everglades, Mr. J. E. Ingraham, third vice-president of the company, writes from St. Augustine, Fla., to

the Manufacturers' Record saying that there is no truth in the rumor. He further states:

"This company proposes to drain some of the lands lying between the Everglades and the coast by opening the natural waterways and making canals through prairies that are cultivated by the farmers in that section. During the latter part of March of this year that part of the State had several days of excessive rains, which overflowed a great many of the large tomato fields and ruined the crops. Upon investigation we found that had the land been properly drained very little damage would have occurred. Part of the work we are undertaking is to be done by machinery, and part by hand labor."

East & West of Georgia.

Mr. Seaborn Reese writes from Sparta, Ga., to the Manufacturers' Record concerning the recently-chartered East & West Railroad Co. of Georgia, of which W. B. Bennett is president, as follows:

"The road runs from Sparta, Hancock county, to Sandersville, Washington county, through a very fertile agricultural region, with the finest granite beds and pine forest along the line. Nearly the entire distance has been graded under a former charter. No engineers have been employed at present, but we hope soon to begin work."

Besides Mr. Reese, the incorporators are R. B. Baxter, E. A. Rosier, Julius Mander of Hancock county and W. B. Bennett, Charles V. Smith, John J. Lovett, Henry M. Carrer, Wm. H. Smith and I. Bashinski of Washington county. The distance from Sparta to Sandersville is thirty miles.

Maryland & Pennsylvania.

Mr. Thomas M. Ward, engineer of the Maryland & Pennsylvania Railroad Co. of Baltimore, Md., writes regarding its rumored extension to the Manufacturers' Record as follows:

"This company is engaged in making surveys for a proposed line from Bynum Station to Conowingo, Md., on the Susquehanna river, in Harford county. The line is only problematical, and its construction not yet decided upon. The line runs between the points named through a very productive farming country, and touches Allibone, Dublin and Castleton."

"Work on the main line of our road is progressing nicely; trestles are being filled or replaced by iron bridges, and alignment changed, together with a large amount of general work on track."

After New Coal Supplies.

Advices from Knoxville, Tenn., are to the effect that the Southern Railway is pushing its plans to extend through the Middlesboro (Ky.) coal fields. It is stated that the company has taken the entire output of the Middlesboro mines for several months, but that plans are under way to open up other mines in that region, so that it will be able to furnish all the steam coal required by the Southern Railway on its divisions which obtain their fuel supplies from Tennessee and Kentucky mines. When these new mines are opened the railroad will, it is reported, cease taking its coal from the Jellico and Coal Creek operators, so that the whole product will find its way into the open market.

Carolina & Northwestern.

Concerning the report that the Carolina & Northwestern Railroad will build an extension from Lenoir, N. C., to connect with the Norfolk & Western, probably at Bristol, Tenn., Mr. L. T. Nichols, general manager, writes from Chester, S.

C., to the Manufacturers' Record as follows:

"Our people are working on an extension of thirty-five miles out of Lenoir, N. C., in Caldwell county, up Wilson creek to the top of the mountains. The plans beyond that point have not yet been made public."

The work is in charge of J. R. Ervin, chief engineer of the South Atlantic Construction Co. at Lenoir.

Pearl & Leaf Extension.

Mr. W. A. Stevenson, general manager of the Pearl & Leaf River Railroad Co., writes from Hattiesburg, Miss., to the Manufacturers' Record as follows:

"The Pearl & Leaf River Railroad Co., now operating between Hattiesburg and Prentiss, Miss., will immediately extend its line nine and one-quarter miles in a westerly direction from Prentiss to Silver Creek, where it will connect with the Columbia-Mendenhall branch of the Gulf & Ship Island Railroad, now being built. The country traversed is partly timber and partly agricultural, and will furnish a western connection for the Pearl & Leaf River Railroad."

Atlanta Union Station.

P. Thornton Marye of Washington, D. C., has been selected by the Atlanta Terminal Co. as the architect for the new union station to be built in Atlanta, Ga. Mr. Marye will, it is reported, immediately take charge of work on the new building, and H. M. Steele, chief engineer of the Central Railway of Georgia, has been chosen chief engineer for the Terminal Company. Bruce & Morgan, architects, of Atlanta, were awarded a prize of \$1000 for the set of plans which stood next highest in the estimation of the judges. The new station will contain ten tracks, each having a capacity of twelve cars.

Washington Union Terminal.

Preparations for building the new union station at Washington, D. C., are reported to have begun, thirty-two houses on the site of the terminal having been sold. Altogether about 400 buildings will be removed. The Pennsylvania Railroad Co., which has charge of part of the work, has called for proposals by May 11 for constructing the double tunnels, and also for building the line necessary for connecting the Pennsylvania and the Baltimore & Ohio tracks immediately northeast of Washington.

Northern Central Earnings.

The Northern Central Railway Co. makes the following report of earnings and expenses for March, 1903, comparison being made with the same month of last year: Gross earnings, increase, \$197,900; expenses, increase, \$180,200; net earnings, increase, \$17,700. For three months ending March 31, gross earnings, increase, \$432,200; expenses, increase, \$501,400; net earnings, decrease, \$69,200.

Kanawha & Northern.

The Kanawha & Northern Railway Co. of Iydale, Clay county, West Virginia, has been granted a charter in that State to build a railroad from the mouth of Big Otter, on the Elk river, to Parkersburg, a distance of about sixty miles. The incorporators are V. L. Black and Angus McDonald of Charleston, W. Va.; J. W. Angus of Elizabeth, N. J.; D. S. Benson and F. M. Gramm of Iydale, W. Va.

New Depot at Farmville.

Mr. Kenner T. Crawley, president of the Virginia Railway Co. at Farmville, Va., has sent the Manufacturers' Record two photographs of the new passen-

ger station there, which is one of the finest depots in the southern part of Virginia. It is a pretty and tasteful building, and commodiously equipped.

Railroad Notes.

The International & Great Northern Railroad has opened its line into Fort Worth, Texas, for passenger business.

Reports from Chattanooga, Tenn., state that a plan is under way to consolidate the Chattanooga Electric Railway Co., the Chattanooga Rapid Transit Co. and the Chattanooga Light & Power Co.

According to an unconfirmed report from New York, the managers of the Gould system are considering to build an extension from Memphis, Tenn., to Birmingham, Ala., to connect with the Seaboard Air Line.

Official announcement is reported of the purchase of the St. Louis Valley Railway by the St. Louis, Iron Mountain & Southern Railroad of the Gould system. The line bought runs from East St. Louis ninety-two miles to Fordyce, Ill., and will, it is reported, be extended to connect with the Wabash Railroad so as to make a direct line between Chicago and the South.

Pushing the Shipbuilding Plant.

Mr. C. W. Tebault, general manager of the Norfolk-Hampton Roads Shipbuilding & Dry-Dock Co., Norfolk, Va., positively denies the statement, published in several papers, that the project had fallen through or had been abandoned. He said: "We are going ahead with the plant as rapidly as possible as outlined in our prospectus and legislative charter. A 1000-foot dry-dock will positively be started to be built in the early summer, and we hope to have it completed in eighteen months from the time of starting. Mr. W. P. Harrison of Cincinnati, Ohio, is still the president of this company, and has no thought or intention of abandoning the plans published generally by the press of the country. We have been constantly at work with our engineering corps, and the work has been pushed as rapidly as circumstances will permit. We will build this plant at Sewell's Point, which will be up to date in every particular, trying to profit by the mistakes made by others."

The officers of the company are W. P. Harrison of Cincinnati, who is also the president of the World Manufacturing Co., president; W. H. Knauss of Columbus, Ohio, vice-president and treasurer; J. T. Gamble of Columbus, Ohio, secretary. J. Vernon Ewan of Covington, Ky., and T. J. Davis of Cincinnati, Ohio, cashier of the Second National Bank, are directors, and Mr. C. W. Tebault of Norfolk, Va., general manager. The capital stock is \$5,000,000, and the authorized capital \$10,000,000.

Steel Car Plant for Baltimore.

Arrangements have been completed ensuring the consolidation of the South Baltimore Car Works, the South Baltimore Foundry and the Ryan & McDonald Manufacturing Co. at Baltimore, Md., in accordance with the plan announced in February. The South Baltimore Steel Car & Foundry Co. will be organized, with capital stock of \$1,000,000 or \$2,000,000, to take over the three properties, and about \$400,000 will be available for enlarging and improving the plants. The most important betterment will be the addition of a modern steel car construction plant to the present wooden-car works. Charles T. Crane, president of the Farmers and Merchants' National Bank, is chairman of the committee in charge of the new organization.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Southern Cotton Spinners.

The program of the seventh annual convention of the Southern Cotton Spinners' Association to be held at Charlotte, N. C., May 14 and 15, includes addresses by Gen. W. F. Draper of the Draper Company, Hopedale, Mass., on "The Development of Rapidly-Running or Yielding-Bearing Spindles;" by E. W. Thomas of Charlotte, N. C., on "The Advantage of Diversifying Manufactures in the South;" by T. V. Bolan of Baltimore, Md., of the General Electric Co., on "The Electric Drive in Cotton-Spinning and General Driving in Cotton Mills;" by Edward Atkinson of Boston, president of the Boston Manufacturers' Mutual Fire Insurance Co., on "Mutual Fire Protection;" by W. D. A. Ryan of Lynn, Mass., of the General Electric Co., subject to be named later; by Secretary James Wilson of the National Department of Agriculture, subject to be named later; by H. J. Webber of the National Department of Agriculture on "Breeding and Cultivation of Cotton, Producing Better Fiber," and by Lauris Loomis of Catlin & Co., New York, on "Southern Cotton Mills, and How Their Export Trade May Be Increased." President George B. Hiss of the association will make his annual address, and the body will be welcomed by T. C. Guthrie of Charlotte, N. C., to which response will be made by W. C. Heath of Monroe, N. C. Reports will be made by C. B. Bryant, secretary and treasurer, and by the committees on finance and on ways and means.

A Model Mill Town.

One of the model cotton-milling towns is Pelzer, S. C. It has a population of about 7000, but has no municipal government or officers except a few policemen, whose role is evidently largely a matter of precaution. Pelzer has at different times figured in the press of the country because of its peculiar yet most gratifying status, ensuring the moral and material welfare and development of the employees of the cotton mill whose establishment created the town. The population consists of the mill operatives, officers, superintendent, storekeepers and school teachers. These are all employees of the Pelzer Manufacturing Co., which operates a total of 120,000 ring spindles and 3200 looms in the manufacture of sheeting, shirtings and drills. This corporation, through its president, Ellison A. Smyth, manages the entire community. It owns the churches, hotels, schools, bank, armory and lyceum. The best possible service is rendered in the conduct of these different requirements of modern home and business life. The educational advantages referred to and the facilities of the lyceum, as well as all the other desirable features of Pelzer, are furnished the employees and their families by the corporation.

One of the most peculiar regulations in Pelzer is the exclusion from its limits of lawyers, editors, actresses and negroes. They are not allowed to establish a domicile there.

The Siluria Mills.

The Siluria Cotton Mill Co. of Siluria, Ala., fully reported as organized, etc., in December last, is proceeding with the construction of its plant. Messrs. W. B. Smith Whaley & Co. of Boston, Mass., and Columbia, S. C., are the architects in charge. Messrs. T. C. Thompson & Bros. of Birmingham, Ala., are the con-

tractors for the buildings, the main structure of which will be 80x260 feet, two stories high. The opener and picker rooms will be a separate building two stories high, and there will be a one-story warehouse 75x75 feet. The machinery has been purchased, to include 10,000 spindles, 300 looms, 16 cards, etc., for manufacturing 64x64-28-inch print cloth. This plant will be driven electrically, and is expected to begin production in October.

Doubling a \$450,000 Mill.

Particulars were announced in the Manufacturers' Record of March 12 as to the doubling of the Monaghan Mills at Greenville, S. C. Messrs. J. F. Grandy & Son, contractors for the 131x164-foot mill, have since made good progress, and expect to complete the building by August 15. The equipment of 30,000 spindles and 700 looms will then be placed in position and be put in operation by October 1 in time for the new crop. The weaving equipment will be arranged as follows: 300 40-inch looms on domestic goods for converting, 200 40-inch looms on dobby work and 200 60-inch looms on cloths for making oilcloths, shade cloths, bagging, etc. J. E. Sirrine of Greenville is the engineer in charge of construction.

A \$500,000 Plant.

The textile interests of Georgia will be augmented this year by a \$500,000 cotton factory and mill town, to be established by Ohio manufacturers. Site has been purchased at Cartersville, Ga., and a brick mill building, 125x600 feet in size, will be erected and equipped with 25,000 spindles and about 375 looms. The E. L. McClain Manufacturing Co. of Greenfield, Ohio, will own and operate the plant, producing large quantities of ducking to be used in its horse-collar factory in Ohio. The Georgia plant will also make fabrics into finished products. About 100 tenement cottages will be erected for the operatives and a modern mill town will be established.

Developing Neal's Shoals.

The Union (S. C.) Manufacturing & Power Co.'s dam, mentioned last week, will be about 750 feet long by 20 feet high, and is expected to develop about 8000 horse-power, of which about 6000 will be transmitted electrically. George O. Tenney of Spartanburg, S. C., will construct the dam and the power-house, and the General Electric Co. of Schenectady, N. Y., will furnish the electrical equipment. Messrs. W. B. Smith Whaley & Co. of Columbia, S. C., and Boston, Mass., are the engineers. T. C. Duncan is president and treasurer of the company, the latter having a capital stock of \$500,000.

Completing \$250,000 Enlargement.

It is of interest to note that the American Spinning Co. of Greenville, S. C., has completed its \$250,000 enlargement which was decided upon and contracted for in September last. The new building is a 104x141-foot structure, in which has been installed 14,400 spindles and 310 looms for the production of fine sheetings. This increases the company's equipment in Mill No. 2 to 25,152 spindles and 662 looms. J. E. Sirrine of Greenville, S. C., was the engineer in charge and Nicholas Ittner of Atlanta, Ga., erected the building. The company's No. 1 mill has 24,000 ring spindles and 352 looms.

Improvements to Cost \$25,000.

Trenton Cotton Mills of Gastonia, N. C., was announced in March as having contracted for 2000 spindles and other

equipment. This company is now making the improvements, upon which will be expended about \$25,000. It is filling up unoccupied space by displacing thirty-six small cards with nine new revolving flat cards and adding 2048 ring spindles and 1030 twister spindles and complement of slubbers, speeders, etc., to bring the whole equipment up to 8448 ring spindles. The new machinery is now arriving and the company expects to have it in operation early in June.

A \$200,000 Mill.

The incorporation of the Issaqueena Mills of Central, S. C., was announced last month. The company has permanently organized this week, electing D. K. Norris president and treasurer, and has a capital of \$200,000. It has been decided to build a plant of 10,000 spindles and 325 narrow looms for manufacturing standard print cloth. Plans for the buildings are being prepared, and contracts for their construction will be awarded soon. Steam-power will be used. O. A. Robbins of Charlotte, N. C., is the engineer in charge.

The Cotton Movement.

According to the report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, the amount of cotton brought into sight during eight months of the present season was 10,018,123 bales, an increase over the same period last year of 257,142 bales. The exports were 6,208,025 bales, an increase of 280,142 bales; takings by Northern spinners, 1,950,957 bales, an increase of 8406 bales; by Southern spinners, 1,571,780 bales, an increase of 172,305 bales.

Textile Notes.

It is reported, but not confirmed by authority, that the Lumberton (N. C.) Cotton Mills will add 5000 spindles.

Middle Georgia Cotton Mills of Eatonton, Ga., has awarded contract for 1800 additional spindles. The company's present equipment is 3300 spindles.

Southern Cotton Down Co. of Columbus, Miss., has been incorporated, with capital stock of \$100,000. Further facts have not been made public yet.

Klots Throwing Co. contemplates enlarging its branch silk mill, a plant of 10,000 spindles, at Fredericksburg, Va. This company has its main mills at Carbondale, Pa.

Messrs. M. M. Hunter, J. J. Sippon, E. G. Evans, Jr., and W. J. Martin have incorporated Pendleton Cotton Mills of Pendleton, S. C., to establish a plant. The capital stock is \$65,000.

Jacob E. Patchon has decided to establish a woolen-cloth mill at Keyser, W. Va. He has purchased two acres of land as site for the enterprise, and will erect building 180x195 feet. Further details are under consideration.

Dan River Power & Manufacturing Co., Danville, Va., has let contract to Charles Orchard for the construction of a reservoir approximating 1,000,000 gallons capacity, in connection with its developments for new mills near the city.

Messrs. Frank Woodman, Harry L. Minsker, Solomon Minsker and George Minsker and Miss Nannie C. Woodman, all of Charleston, W. Va., have incorporated the Kanawha Woolen Mills to manufacture woolen fabrics. The capital stock is \$50,000.

Cotton manufacturers from Lowell and Fall River, Mass., are investigating Southern facilities with a view to building several branch cotton mills in the South. It is stated that Tracey W. Pratt of Huntsville, Ala., is endeavoring to secure these plants for Huntsville.

D. C. Brown of Anderson, S. C., is organizing a company to build a cotton factory at Iva, S. C. He proposes a capital stock of \$200,000, about half of which Iva investors are asked to take. A mill of 10,000 spindles and 300 looms, for manufacturing fine cloth, is contemplated.

Union Oil Co. of Union Point, Ga., has purchased Sparta Cotton Mills of Sparta, Ga. This property includes a four-story brick structure 50x100 feet in size, 5120 spindles, 50 narrow looms, 29 operatives' cottages, 20 acres of land, etc. The purchaser will modernize plant and operate it.

The Board of Trade, Taylor, Texas, has called a meeting to discuss plans for organizing the proposed cotton-mill company mentioned last week. A capital stock of \$100,000 is contemplated. Messrs. L. H. Goldstein, T. W. Marse, H. Bland and J. S. Jones are the committee in charge.

Messrs. H. A. Yount of New Sterling, N. C.; A. B. Saunders of Statesville, N. C., and Charles Webb & Co. of Philadelphia, Pa., have incorporated the Bloomfield Manufacturing Co. of Statesville, N. C., for manufacturing textile fabrics. Details of mill yet to be determined. The capital stock is \$150,000.

West Point (Ga.) Manufacturing Co. has begun the erection of an extension to its buildings, consisting of a three-story room 80x100 feet, to cost about \$15,000. The machinery to be added will be in the direction of more thoroughly perfecting the mill's organization for manufacturing duck. It was announced last December that this company proposed installing roving machinery, 6000 spindles and 100 looms.

Fulton Bag & Cotton Mills, Atlanta, Ga. (reported last month as to build a 50,000-spindle addition) have awarded contract for a 1600-horse-power steam plant to operate its proposed new mill. As was stated previously, about \$300,000 will be expended on this new mill, and contract for the textile machinery was previously signed. Messrs. W. B. Smith Whaley & Co. of Boston, Mass., and Columbia, S. C., are the engineers in charge.

Mention was made last month of rumors that the Statesville (N. C.) Cotton Mills contemplated building a 5000-spindle addition for manufacturing fine yarns. It is now announced that a separate company will be organized to build the plant, to be equipped for manufacturing 40 and 80 yarns from Egyptian staple. Messrs. Wm. Wallace, president; T. D. Miller, secretary, and other officers of the Statesville Cotton Mills will form the new company.

Kesler Manufacturing Co., Salisbury, N. C., has completed the improvements announced in February. The additional building that was purchased is now equipped with 6240 spindles; 3328 spindles were added to original mill, making an increase of 9568 spindles. This gives the plant a total of 20,800 spindles and 248 looms. The company has purchased all machinery and supplies needed in connection with the improvements, and does not contemplate any further betterments at this time.

Clark Manufacturing Co. of Jonesboro, N. C., has been incorporated, with capital stock of \$100,000, to establish a cotton mill, power for which will be supplied by an established cotton factory. David Clark is president, and W. A. Graham Clark of Raleigh, N. C., is treasurer. Others who are stockholders include Messrs. S. H. Buchanan of Jonesboro, N. C.; L. M. Foushee, Fletcher Makepeace, J. Alton McIver, Watson & Godfrey and associates. Details as to mill have not been announced.

COTTONSEED OIL.

This department is open to the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

Oil-Mill Superintendents.

The tenth annual session of the Oil Mill Superintendents' Association, of which Mr. R. H. Schumacher of Navasota, Texas, is president, will be held at Sherman, Texas, May 27, 28 and 29. The papers to be presented are as follows:

"The Huller: Its Use and Abuse," by Charles Duncan, Greenville, Texas, and J. N. Russel, McGregor, Texas; "Meal and Cake and Its Proper Handling," by C. P. Bass, Morgan, Texas, and J. N. Settle, Denton, Texas; "The Selection of a Steam Boiler," by P. M. Moore, inspector Hartford Steam Boiler Inspection & Insurance Co., St. Louis; "Rope Transmission," by Dodge Manufacturing Co., Mishawaka, Ind.; "The Use of Magnets in the Mill," by Dixie Electro-Magnet Co., Memphis, Tenn.; "Theory and Practice of Working Meal," by R. H. Schumacher, Navasota, Texas; "Should Steam Pipes be Covered, and the Saving Thereof," by the Philip Carey Manufacturing Co., St. Louis, Mo.; "Crude Oil from the Press to the Shipping Tank," by H. Wunderlich, Waco, Texas, and G. J. Duke, Pittsburg, Texas; "The Simplex vs. Duplex Pump," by A. S. Cameron Steam Pump Works, New York; "The Cake-Former and Its Use," by M. B. Wilson, San Marcos, Texas; "The Roller Bearing as a Power Saver," by Hyatt Roller-Bearing Co., Harrison, N. J.; "Scales and Their Maintenance," by N. L. Hatcher, scale inspector International & Great Northern Railroad, Palestine, Texas; "The Labor Question," by George T. Parkhouse, Cisco, Texas; "The Attrition Mill and Its Relation for Grinding Cottonseed Cake," by John W. Taylor of Sprout, Waldron & Co., Muncy, Pa.; "Belts: Their Use and Abuse," by Aug. Balzer, La Grange, Texas, and William Bauer, Jr., Burton, Texas; "Why Should Seed be Cleaned Before Going to Seed-house?" by H. J. J. Thiessen, Sherman, Texas.

Cottonseed-Oil Notes.

The Jefferson Cotton Oil Co.'s plant at Jefferson, Texas, was destroyed by fire on the 1st inst. The loss is approximated at \$75,000. Insurance not known.

Theodore Dreyfus, Joseph Wolff and others will soon erect a \$50,000 oil mill and gin at Maringouin, La. The order for machinery will be placed in a few days.

The Oxford Oil Co. of Oxford, Miss., has been chartered, with a capital stock of \$60,000. The incorporators are B. T. Kimbrough, S. H. Plant, F. M. Stowers, T. H. Somerville and others.

The Huntsville Oil Mill, at Huntsville, Texas, closed for the season last week. The mill turned out during the season 75,000 gallons of oil, 900 tons of meal, 129 bales of linters and a large quantity of hulls.

The Interstate Cottonseed Crushers' Association will hold its annual convention in Memphis, Tenn., on the 28th inst. This association includes every department of the cotton-oil business. It is estimated that over 300 delegates will be in attendance at the convention.

Exporters at Galveston, Texas, made the following quotations on cottonseed products on the 1st inst.: Cottonseed-meal, prime, delivered at Galveston, \$22.50 to \$23.50, according to quality, per short ton of 2000 pounds; cottonseed-oil, prime crude, f. o. b. Texas mills, loose in tank cars, 33½ cents; off crude, light

demand at 26 to 29 cents, according to quality.

Cottonseed and its products at Dallas, Texas, last week was rather quiet. The trading in oil was light. Prime oil is held for a higher market and practically none is offering. Prices for off oils were easier, ranging from 20 cents to 30 cents for the lower grades. Meal is now selling on sample, and for the off grades offers have been made at \$15 to \$17 per ton, f. o. b. mills.

At a meeting of the board of directors of the American Cotton Oil Co., held in New York on the 5th inst., Mr. James B. McMahon was elected a director for the remainder of the current corporate year, to fill a vacancy. Mr. McMahon is second vice-president of the U. K. Fairbanks Company. The directors have declared the regular semi-annual dividend of 3 per cent., payable June 1.

The following quotations and receipts of cottonseed products were current at Memphis, Tenn., on the 2d inst. Prime crude oil, per gallon, 37 cents; off crude, 27 to 35½ cents; prime summer yellow, 40 cents; choice cooking summer yellow, 45 to 47 cents; cottonseed meal, \$20.25 per ton for prime, and cottonseed cake, \$20; linters, 3½ to 3¾ cents per pound; cottonseed, including sacks, by river, \$14 per ton; by rail, \$15, and wagon, \$16. Receipts of seed since September 1, 4272 cars and 584,979 sacks, against 3281 cars and 572,285 sacks for the same period last year.

The annual meeting of the stockholders of the Saluda Oil Mill Co. was held at Saluda, S. C., on the 1st inst. The reports of the various officers showed the mill to be in excellent condition. The following were elected directors for the ensuing year: Alvin Etheridge, B. W. Crouch, Noah Crouch, Dr. J. J. Kirksey, Walter Satcher, G. H. Berry and W. O. Carson. Messrs. Etheridge, Berry and Crouch were members of last year's directorate, the others named being new members. At the directors' meeting, held afterward, Alvin Etheridge was elected president and general manager; W. O. Carson, vice-president, and B. W. Crouch, treasurer.

Cottonseed products were quoted on the Cotton Exchange in New Orleans on the 4th inst. as follows: Prime refined oil in barrels, per gallon, 42½ cents; off refined oil in barrels, per gallon, 37 cents; prime crude oil, loose, per gallon, 35½ to 36½ cents; off crude oil, loose, per gallon, 25 to 30 cents; prime cottonseed cake, per ton of 2240 pounds, \$24 to \$24.25; prime cottonseed meal, per ton of 2240 pounds, \$25.12½; soap stock, per pound, loose, 1.12½ cents; linters, choice, per pound, 4¾ cents; A, 4½ cents; B, 3¾ cents; C, 3½ cents; cottonseed in sacks delivered at New Orleans, per ton of 2000 pounds, \$14; in bulk delivered at New Orleans, per ton of 2000 pounds, \$13.

The quarter of the present year ending March 31 represents the industries of South Carolina as showing an unusual development. In cottonseed-oil mills the following charters were reported: Independent Oil Co., with a capital of \$1,000,000; Fort Motte, \$20,000; Rowesville, \$20,000; Lydia, \$3000; Westminster, \$20,000; Williamsburg, \$20,000; Clarendon, \$25,000; Bishopville, \$25,000; Allendale, \$25,000, and Walterboro, \$25,000. In addition to the above the following are in process of organization: Prosperity, \$20,000; Townville, \$25,000; Cameron, \$20,000; Edists, \$20,000; Donalds, \$15,000; Oconee, \$20,000, and Pauline, \$15,000; total, \$115,000. Increase in capital, Kershaw, \$25,000 to \$35,000. Grand total of new capital in mills organized and projected this year, \$308,000.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,

Baltimore, Md., May 6.

The situation in phosphate rock in the local market is without change, and the volume of business of moderate proportions. Fertilizer manufacturers are well supplied for the present, and are only buying in small lots. Prices for all descriptions of rock are very steady. The phosphate charters reported last week were as follows: British steamship Phyllis, 1574 tons, from Coosaw to United Kingdom or Continent on private terms, May; steamship Bangalore from Charlotte Harbor to Baltimore at or about \$2.40, and steamship Elswick Manor from Port Inglis and New Orleans to Continent on private terms. The situation at points of production in the Southern phosphate belt continues to improve, and reports from mining sections and from shippers are very satisfactory. In the pebble section, as well as in the hard-rock section of Florida, the market shows better form, while at Mt. Pleasant in Tennessee both the domestic and export movement is improving. Of the general tone of the industry at home and abroad, La Phosphate of Paris, in its issue of April 22, says: "Weeks follow and resemble one another; in fact, the markets, in presence of an active demand and the importance of orders to be executed, are maintained at their preceding level or only offer variations of no general bearing. This situation, excellent both for operators and dealers, will likely yet improve, as it is evident that all needs are not covered and new ones are daily increasing. In America markets are as firm as possible, and one hardly signs new contracts without being assured of slight advance. The agreement lately entered into between the principal operators of Florida is certainly not foreign to these pretensions, justified besides, which exercise a certain influence on the markets. In the regions of land pebble and hard rock offers by no means correspond with the demands; these surpass the most optimistic anticipations; consequently the advance movement receives from this fact a decisive impulse. In Tennessee operators appear to be disinterested somewhat in export, having more interest in satisfying the growing needs of the domestic market. In the United States, as in England, Germany, France, and we may say in all countries of Europe, the consumption of phosphates undergoes a remarkable development. In giving attention to the domestic market operators of Tennessee find relatively advantageous outlets; this explains the stated decrease in the exports of phosphates from that district."

Fertilizer Ingredients.

The local market for ammoniates is fairly active, with a good inquiry from the East, and from Southern sources some good contracts have been closed at satisfactory figures. In the West packers report stock still light, and are holding blood and tankage at outside figures.

The following table represents the prices current at this date:

Sulph. of ammonia (gas), spot.	\$3 07½ @ 3 10
do. foreign prompt.	3 25 @ 3 27½
Nitrate of soda, spot Balto.	2 00 @ —
Blood	2 65 @ 2 67½
Azotine (beef)	2 57½ @ 2 60
Azotine (pork)	2 57½ @ 2 60
Tankage (concentrated)	2 47½ @ 2 50
Tankage (5 and 20)	2 62½ @ 10¢ 2 65 & 10
Tankage (7 and 30)	20 50 @ 21 00
Fish (dry)	32 50 @ 35 00

Phosphate and Fertilizer Notes.

The shipments of phosphate rock from the port of Fernandina, Fla., for the month of April amounted to 31,900 tons, previously reported 20,965 tons, making

total shipments for the four months ending April 30, 1903, aggregate 52,865 tons.

The International Chemical Co., whose plant is located in the rear of Port Chalmette, at New Orleans, will commence operations in a few days. Mr. George Stockman is manager for the company.

At the annual meeting of the Spiritine Chemical Co. of Wilmington, N. C., Mr. Matthew J. Heyer was elected a director to succeed the late Capt. W. R. Kenan. Other members of the board were re-elected. Mr. Heyer was elected secretary and treasurer.

At Mount Pleasant, Tenn., operations in phosphate mining, under better weather conditions, are now in full blast. Every mine is being operated, and rock is being put above ground as rapidly as possible, while shipments, both domestic and export, continue very heavy.

It is stated that large deposits of phosphate have just been discovered on Ocean Island, in Polynesia. The rock is reported to contain 86 per cent. of lime phosphate, as against 83 per cent. of those of Christmas Island, and 78 per cent. of our Florida phosphate deposits.

The Pollock Fertilizer Co., R. H. Pollock, president, has purchased the Hazard wharf property at Canton, Baltimore county, Md., and will award contracts at once for the erection of fertilizer factory and warehouses. The main building will be of brick and steel construction, 200x470 feet, and will cost, exclusive of machinery, \$100,000. Mr. R. H. Pollock is also president of the Hanover Fertilizer Co. of Hanover, Pa.

Mr. Joseph Hull of Savannah, Ga., proprietor of the Prairie Pebble Phosphate Co., who recently took over the plant and property of the Land Phosphate Co., located at Land Pebble, Fla., has just purchased the McLean properties. The deal was closed on the 1st inst., and these properties, consisting of the plants of the Florida Engineering Co. and the Phosphoria Phosphate Co., are now controlled by Mr. Hull.

It is stated that Messrs. Dutton & Co. of Gainesville, Fla., have purchased the entire phosphate holdings of Messrs. Ford & Hillen of Ocala, one of the largest mining concerns in the State. The Dutton Company will now be reorganized, with the following officers: C. W. Chase, president and general manager; H. F. Dutton, vice-president; J. G. Nichols, secretary, and W. G. Robinson, treasurer. The offices will be transferred from Ocala to Gainesville.

Mr. Charles E. Edgar of New Jersey, with President M. Cockrell of the First National Bank of Flatonis, Texas, have been making an inspection of the kaolin mines two miles northwest of that city. The kaolin beds cover several thousand acres, and there is an inexhaustible supply, which is pronounced by experts as first-class kaolin. A big deal is said to be on hand, and the chances are that a factory will be built which will utilize this valuable material.

The Curry Fertilizer Co. of Louisville, Ky., has purchased a site of seven acres near Pensacola, upon which it will erect one of the largest fertilizer plants in the South. The deal for the site was closed several months ago, but the announcement of the location of the plant was not made public until last week, when specifications of the buildings and warehouse were placed in the hands of prospective bidders. The work of construction will commence within thirty days.

If you are thinking of enlarging your mill, factory or mine, or of purchasing machinery of any kind, send the Manufacturers' Record a postal card giving the character of the machinery needed.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.**Baltimore.**

Office Manufacturers' Record,
Baltimore, Md., May 6.

The local lumber market still continues quiet, with, however, a steady tone to all the woods offering. The demand at the moment from the various local concerns is moderate, and the labor situation, which is still unsettled, has a tendency to lessen the demand for building material. From out of town there is a good inquiry for lumber of all descriptions. In North Carolina pine the receipts are quite liberal, and the outlook for actual business with distant points is quite encouraging. Prices are now generally well maintained for most grades. Cypress is in moderate request, and prices steady. White pine is quiet, while values rule firm at quotations. Poplar is still in good demand, and mills are generally rushed with orders. All hardwoods are now strong and in good demand, with some grades showing a slight advance. Oak, ash, walnut and other woods are being taken by furniture manufacturers, wagon shops, car shops and other woodworking concerns, and orders are generally for prompt or near delivery. The export trade in hardwoods is still quiet, and exporters are shipping in moderate lots.

Norfolk.

[From our own Correspondent.]

Norfolk, Va., May 4.

The lumber market in this section is at the moment showing better indications for a steady volume of trade. The demand for North Carolina pine is now more decided, and from the Middle and Eastern States reports of improvement in building and construction are more favorable. Orders have been steadily coming to hand for several weeks, but the unsettled weather has precluded the possibility of filling them promptly. In the logging section operations are still more or less restricted, and several weeks of dry weather must elapse before we can hope for having much activity in shipments. The tone of the market for all desirable grades of lumber is very steady, and everything points to a good volume of business during the summer months, provided the labor question is settled. The foreign demand for North Carolina pine is showing considerable improvement, and exporters and importers are nearer together in their views on questions which have recently interfered with trade between this country and the United Kingdom and continental ports. The local demand for lumber has been quite moderate recently, but the outlook now is much improved. Among planing mills here there is considerable activity, and all are generally having as much business as they can handle at present. Among all woodworking concerns there is the usual stir at this period of the season, when the demand for truck and fruit carriers is urgent. In hardwoods the volume of business is improving, and there is a fair demand for oak and ash; poplar is also called for, and is firm as to value. All other hardwoods on the market are generally steady, with prices well maintained.

Savannah.

[From our own Correspondent.]

Savannah, Ga., May 4.

The week under review has been a very active one among lumbermen here, and

orders have been coming in thick and fast. Prices are about steady, although lumber is now sold much lower than for the same date one year ago. At this period of the season there is generally a lull in the trade, but at the moment indications point to a very busy season during the summer months. In the sawmill sections of the State everything is very active in wood products, and mills have in some cases difficulty in filling orders promptly. The shipments of the week were much larger than usual, and the foreign shipments especially show considerable improvement. The coastwise shipments by steamers amounted to 1,463,874 feet of lumber, and by schooners 5,807,303 feet, or a total coastwise of 7,271,177 feet. The foreign shipments were as follows: Barkentine Kremlin for St. Johns, N. B., with 552,016 feet of yellow-pine lumber; a schooner for Sydney with 297,162 feet; steamship Dunster for Rotterdam with 5700 oak staves, 986 logs sawn pitch-pine timber, or 358,116 feet, and 1296 feet of lumber; steamship Hempstead for Montreal with 1,495,801 feet of lumber by the Georgia Lumber Co. The steamship Undaunted cleared for Liverpool with lumber and timber for Liverpool, England, valued at \$15,000. The following quotations for lumber were current on Saturday last: Minimum easy-sized yard stock, \$12 to \$14; car sills, \$14 to \$16; ship stock, \$22; sawn ties, \$10.50 to \$11 per 1000 feet; hewn ties, 40 cents, and switch ties, \$11.50. The naval-stores market has ruled unsettled and easy. Spirits on the 1st closed firm at the decline, settling at 45 cents. The demand, however, at the close was not urgent. Rosins closed firm, with a fair demand. It is thought by naval-stores men that the market has reached the limit of its decline for the present, both in spirits and rosins.

Brunswick.

[From our own Correspondent.]

Brunswick, Ga., May 4.

As anticipated, the month of April summed up a large volume of lumber shipments, amounting to a grand total of 24,308,758 superficial feet. The coastwise movement alone was 19,622,404 superficial feet, consisting of 12,334,000 feet of lumber itself and 7,235,804 superficial feet railroad cross-ties (or 164,450 pieces), 44,600 superficial feet cypress shingles (or 223,000 pieces), and 8000 superficial feet laths (or 96,000 pieces). The foreign cargoes amounted to a total of 4,686,354 superficial feet. The destination of the cargoes were: Spain, 1,884,000 feet; Portugal, 1,033,000 feet; Cuba, 1,032,354 feet, and England, 737,000 feet. The Cuba shipments were cypress cross-ties. At the nearby port of Darien the foreign movement was also very pronounced, amounting to a total of 7,951,000 feet, cargoes going as follows: England 5,720,000 feet and Wales 2,231,000 feet; out of this there was only one shipment of hewn timber, 18,333 cubic feet going to England. At Fernandina the total lumber shipments, both foreign and coastwise, amounted to nearly 10,000,000 feet, stocks on hand amounting to about 20,000,000 feet of lumber and 200,000 railroad cross-ties. Freight rates from the South Atlantic are now quoted on a basis from Brunswick to New York with lumber at \$5.50, and cross-ties ranging from 15½ to 17½ cents.

Jacksonville.

[From our own Correspondent.]

Jacksonville, Fla., May 4.

The record of the volume of business of this port in wood products during the month of April shows a material increase over the corresponding month in 1902, and all indications point to the largest

amount of business in 1903 in the history of the industry in this section. The shipments of lumber from this port during April averaged over 412,300 feet a day, and were as follows: Cypress, 310,000 feet; yellow pine, foreign, 845,550 feet, and coastwise, 11,214,000 feet, or a total of 12,369,550 feet. The lumber shipments for the first four months of the present year amounted to 58,927,774 feet, an average of 14,731,943 feet per month, the shipments being as follows: January, 14,526,049; February, 13,731,592 feet; March, 18,300,583 feet; April, 12,369,550. Shipments of shingles in April amounted to 4,060,000, and of cross-ties, 69,950 pieces. The entire market is now showing some very interesting features, mills are all busy and the demand from the usual sources is most pronounced. In logging camps conditions are much improved, and with settled weather enough timber will be furnished mills to keep them running regularly for some time to come. The purchase of timber lands is still going on, and the choicest timber sites are being rapidly taken up at good prices. H. M. Pfann & Co. have purchased from the United Land Co. and Buann, Dean & Co. 28,000 acres of land on Johnson's Island, Osceola county. It is a finely timbered tract and will be offered for sale again by the purchasers. The enlargement of the Clyde Line dock is now of considerable interest to local lumbermen. With the present warehouse extensions, the terminals will have double their former capacity. Eighty feet more of the dock has been added on the west and thirty-three feet on the eastern extremity, making the entire structure 337x60 feet. Adding the capacity of the present warehouse this will give the complete dimensions as 561x180 feet. The sawmills at outlying points are now well supplied with orders and are generally working at full capacity. The sawmills of Hith, Canfield & Sons, at St. Augustine, are rushed with orders, and their business is said to be double that of last year.

Lumber Notes.

The Henderson Lumber Co., at Anthony, W. Va., recently incorporated, will improve and enlarge its plant, increasing its capacity to 30,000 feet per day.

The Consolidated Naval Stores Co. of Jacksonville, Fla., has purchased 100,000 acres of timber lands in Lee county, Florida, but will make no developments or improvements at present.

J. R. Mount has recently purchased for C. C. Mingle & Bros. Co., lumber dealers of Trenton, Tenn., 500 acres of timber land near Memphis, Tenn., and is on a deal for 1000 acres more.

The big Wieth Lumber Co.'s sawmill, nine miles north of Beaumont, Texas, on Pine Island bayou, will be started up this week. The new mill will have a capacity of 75,000 feet per day.

The Hall & Livermore Lumber Co. of Red Springs, N. C., has been chartered, with a capital stock of \$50,000, of which \$10,000 has been subscribed. The incorporators are R. W. Livermore and George H. Hall, Jr.

Messrs. Stearns, Culver & Co. of Ludington, Mich., who purchased the sawmills of Simpson & Co. at Bagdad, Fla., previously mentioned, will start them up immediately. They have been idle for eleven months.

Thomas W. Pitts of Gainesville, Fla., will establish a plant for reduction of Pine wood into useful products, as recently reported. The capacity will be forty cords of wood per day, and the cost of the plant will be \$200,000.

The Lewis & Brooks Lumber Co. of Fairmont, W. Va., has been incorporated,

with a capital stock of \$25,000. The incorporators are G. S. Lewis, H. E. Lewis of Clarksburg, H. C. Brooks, F. L. P. Brooks and F. J. Brooks of Fairmont.

The Bayou Falla Lumber Co., at Kiln, Hancock county, Miss., has been chartered, with a capital stock of \$10,000, and the Picayune Lumber Co., at Picayune, in the same county of Mississippi, has been chartered, with a capital stock of \$5000.

R. H. Bynum of Scottsboro, Ala., has just closed a deal with the Gulf Red Cedar Lumber Co., at Paint Rock, Ala., by which that company takes all the cedar he has in the county. The cedar will be sawed into pencil timber at the Paint Rock mills.

Flowers Bros.' sawmill at Blakely, Ga., was burned on the 27th ult. The loss is placed at \$25,000. The planing mills, kilns and stockhouse were saved. It will take several weeks before they can resume their regular output, which was 50,000 feet per day.

It is stated that a lumber company of Kentucky has closed a deal for 12,000 acres of timber land in the Pearl river district of Mississippi, at a price ranging from three to ten dollars per acre. A railroad forty miles long is to be built into the timber tract.

The Case Lumber Co. of Chattanooga, Tenn., last week purchased a tract of land lying on Cameron Hill for a site for its new milling plant, which will be erected at a cost of \$25,000. Work will begin at once, and the planing mills will have an output of 30,000 feet a day.

The Kinard Lumber Co. of Eldorado, Ark., has been incorporated, with a capital of \$25,000, of which \$10,000 has been subscribed. The officers of the company are C. R. Henry, president; J. A. Rowland, vice-president; J. L. Kinard, secretary and treasurer, and J. H. Walsh, general manager.

Mr. B. F. Bonner, who recently tendered his resignation as manager of the Southwestern Oil Co., has been selected as assistant to the Hon. John H. Kirby, president of the Kirby Lumber Co., at Houston, Texas. The business and the details of the Kirby Lumber Co. have grown to such proportions that the president has found it necessary to divide his duties.

It is stated that a syndicate of American and Canadian capitalists headed by Henry Melville Whitney of Boston has purchased 2,000,000 acres of timber pulp land in Newfoundland, and intends to develop the same on an extensive scale. The syndicate paid over \$1,000,000 for the property, and expects to establish one of the largest enterprises in the eastern provinces.

The inaugural celebration of the boarding school for boys of the Jacob Tome Institute at Port Deposit, Md., will take place May 15 and 16. The institute was founded by Jacob Tome with an endowment of between \$3,000,000 and \$4,000,000. The magnitude of the foundation and the scope of plans for the institute justifies it in extending an invitation to representatives of universities, colleges, technical schools, etc., to attend the celebration.

The selection of coal and asphalt lands in the Choctaw and Chickasaw nations in the Indian Territory for segregation and sale revealed ten coal beds ranging in quality from high-grade bituminous coking to a medium grade bituminous steaming coal. Two general classes of asphalt were found, one the bituminous semi-liquid and the other solid and usually clear of earthy or stony deposits.

MECHANICAL.

Federal Manufacturing Co.

Three months ago, when the Federal Manufacturing Co.'s sheet-steel mill at South Chicago was burned, there was little expectation that the new mill at Elyria, Ohio, would be completed in time for this season. But by extraordinary effort in pushing the work of building and installation to completion the new mill is in operation today, and is illustrated herewith.

The new mill covers five acres of ground,



FEDERAL MANUFACTURING CO.'S SHEET-STEEL MILL.

and is a model plant. Although at present this mill is only equipped for rolling cold steel, it is the intention to erect a new building for rolling hot steel.

The hot-rolling building will be 300x80 feet. All sizes of steel, from two inches wide up to sixteen inches, and in gauge from sixteen to three-eighths inch, is handled.

The pickle-house dimensions are 50x75 feet. Electric hoists and traveling devices convey the stock from this house to all points in the mill where it is rolled.

The cold-rolling department has a capacity of seventy-five tons a day. This building measures 20x80 feet. Stock up to sixteen inches wide and in gauge from .010 to .250 is rolled, cut, straightened, slit and sheared.

The cold-drawing and wire-flattening department is located in a building 140x80 feet.

The annealing department is 60x80 feet wide, and contains six Swindell furnaces fired by patent gas producers.

The shipping-room is 60x80 feet. All steel leaves this room in bright condition.

The boiler-room, 75x60 feet, is equipped with six tubular boilers, each of 150 horsepower. The stokers are automatic.

The gas-producing house, measuring 30x60 feet, is equipped with three machines for supplying gas to the annealing furnaces.

The rotary shear in the shearing-room takes stock one-quarter inch thick and twenty-six inches in any number of strips.

All the equipment has been the special study of David B. Marwick, manager of the plant, who has had a lifetime's experience in steelmaking and steelworking. He held an important position with Illinois Steel Co. before the latter merged with other plants in the United States Steel Corporation. Later he was connected with Morden Frog and Crossing Works in Chicago. Then he was superintendent of Hart & Cooley sheet-steel mill at South Chicago, the product of which plant was famed for its adaptability to press work.

Notes from Northern Machine Shops.

By CHAS. S. GINGRICH, M. E.

I.

The writer had an opportunity recently to visit some machine shops in Pennsylvania and Ohio, and found some very interesting things in the manner in which

work was being done and the rate at which they were doing it. One of the greatest surprises was the milling machine.

The great volume of business that has been coming to machine shops during the past few years has been the means of bringing about a more thorough investigation of cost-reducing methods than has ever taken place heretofore, and has resulted in the redesigning of machine tools. Space does not permit of going into the details of all the new tools, and we will confine ourselves to the milling machines

which we saw and which are doing work in about one-half the time formerly required to do the same work on shapers and small planers.

Among the improvements that were made, the most noticeable was the method of driving the feed. The feed belt and feed cones have been superseded by mechanisms which transmit power from the spindle to the table of the machine entirely through gearing. The result is that there is absolutely no slippage between the spindle and the table of the machine, and instead of limiting the rate of feed to suit the efficiency of the feed belt, these machines are now worked up to the limit

to take the roughing cut by the fastest means possible. It is this roughing cut that is here illustrated. The cutter is four and one-half inches in diameter, and is of the inserted-tooth variety. It takes a cut about one-eighth inch deep, so as to get under the scale, and this work, eight and one-quarter inches wide, is actually fed past the cutter at the rate of eight and one-half inches per minute.

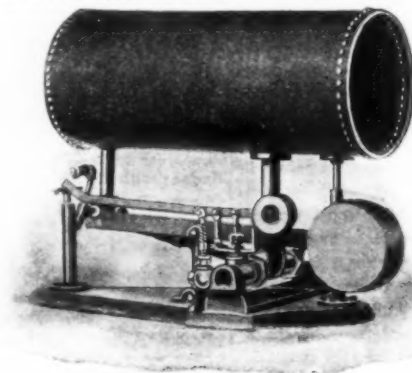
It might also be of interest to note that the teeth of the cutter are made of ordinary carbon steel.

The writer has data in hand of a similar piece of work having been done on

anced by a lever and weight having its fulcrum attached to the base. This is a great improvement over the old movement, as the weight of the water has a greater leverage in starting the tank to tilt over, and vice versa; the counterbalancing weight has a more powerful leverage to bring the tank to its normal condition when the water is discharged.

A slight change made in the construction of the vent to the trap has overcome the necessity for the equalizing pipe, which used to be on the outside of the drum.

An improvement has been made in the



THE MOREHEAD TRAP.

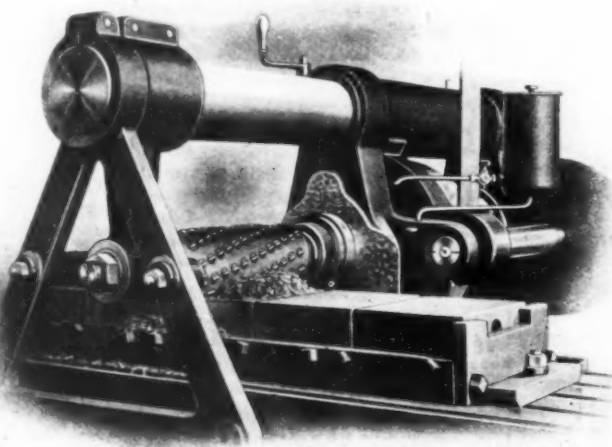
this machine with a cutter with teeth made of "Novo" steel, in which case the rate of feed was ten and one-half inches per minute. The pieces were finished on this same machine feeding about one and one-half inches per minute, and producing a highly-finished surface. We had the privilege of seeing the pieces after the roughing cut had been taken, and were surprised to note that although they were done at the remarkable rate above mentioned, the surface was one that would be admirably adapted for brackets, pedestals, bearing caps and similar work requiring an even surface, but not a high grade of finish.

sent and disc of the steam valve, reducing the possibility of destruction and wear.

All these things tend to greatly improve the appearance of the trap, at the same time preserving the original simplicity of adjustments in every detail.

The trap as now constructed is shown in the accompanying illustration. Further information, prices, etc., may be obtained from the American Blower Co., Detroit, Mich., or any of its branch offices.

Asphalt Rollers. The test of an asphalt roller is the quality of work it will do, the smoothness of the rolled surface and its degree of compression. Rollers of this character are the outgrowth and development of



THE CINCINNATI MILLING MACHINE.

of the main driving belt. The result is that heavier and faster cuts are being taken than were dreamed possible before.

Through the courtesy of the Cincinnati (Ohio) Milling Machine Co., we present an illustration of one of its machines in operation, surfacing cast-iron pieces eight and one-quarter inches wide. We are told that in manufacturing these pieces it is necessary to take first a roughing cut, and then a finishing cut, whether the work is done on a planer or a miller, and it is therefore considered good prac-

Evidently a large amount of the work that engine-builders and general machinists are now planing or shaping can be done on a miller at the above rate.

Morehead Traps.

Since the Morehead trap was described in November some very radical changes in its form and improvements in its construction have been made.

A cast-iron base has been substituted for the wooden platform previously used. The drum, or tank, is now counterbal-

the extensive use into which asphalt has entered throughout this country and other countries. The steam asphalt rollers built by Messrs. Julian Scholl & Co., 126 Liberty street, New York, are the development of the original roller that was used on the first asphalt work done in this country. They have been improved from year to year, the best features being retained and the weak points strengthened until a strong and perfectly smooth rolling machine has been evolved. Illustrated descriptions of these steam asphalt rollers will be found completely yet tersely presented in Messrs. Scholl & Co.'s catalogue No. 23, now ready for mailing to inquirers.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Anniston—Gold Mines.—De Soto Gold Mining Co. has been incorporated, with capital of \$300,000, by W. M. Taylor, H. D. Barr, D. F. Constantine, R. P. Thomason, W. C. Warnock and others for development of gold-bearing properties in Talladega county.

Birmingham—Ore Washer.—Stewart Washer Co. has been incorporated, with capital of \$21,000, by L. G. Stewart of Cincinnati, Ohio, and James Weisel of Birmingham, for manufacture of ore washers.

Birmingham—Machine Shops, etc.—Louisville & Nashville Railroad, Geo. E. Evans, general manager, Louisville, Ky., will expend \$300,000 in erection of machine shops, roundhouse, switchyards, etc., at Boyles.

Birmingham—Dynamite Works.—Birmingham Powder Co., reported several months ago as contemplating erection of dynamite works, has awarded contracts and plant is in course of construction; will be operated under name of Sterling Dynamite Co., and have capacity of several million pounds of dynamite annually. Company also contemplates erection of another powder plant in vicinity of the dynamite works.

Birmingham—Coal Mines and Coke Ovens. Lacey-Bueck Iron Co. has purchased additional mineral lands in Tuscaloosa county, and will open up mines at once, erect number of coke ovens and make other improvements.

Birmingham—Land Improvement.—Boyles Land Co. has been incorporated, with capital of \$10,000, by R. E. Meade, John London and I. C. Beatty.

Evergreen—Ice Plant.—H. C. Hopkins is organizing stock company for erecting ice plant.

Gadsden—Grist Mill.—W. P. Lay will erect grist mill.

Mobile—Basket Factory.—Mobile Basket Co. has reorganized, with capital of \$15,000, and F. L. Wagar, president; C. C. Meacham, vice-president, and J. J. Bartee, secretary-treasurer.

Mobile—Oil Wells.—Lyons Oil Corporation has been chartered, with capital of \$25,700, and A. S. Lyons, president; E. O. Zadek, vice-president; G. A. Amspaugh, secretary, and E. A. Pincus, treasurer.

Rock Run—Limestone Quarry.—Bass Foundry & Machine Co. is opening up and equipping limestone quarry.

Talladega—Fertilizer Factory.—Talladega Fertilizer Co. will double capacity of its fertilizer factory.

ARKANSAS.

Batesville—Mercantile.—Chartered: Theodore Maxfield Company, with capital of \$100,000, by Theodore Maxfield (president) and others.

Batesville—Mercantile.—Chartered: C. W. Maxfield Company, with capital of \$25,000, by C. W. Maxfield and others.

Clarendon—Button Factory.—Clarendon Button Co. has been incorporated, with capital of \$40,000, for manufacture of buttons, by John B. Moore, T. T. Bateman, Jay Wheelock and others.

Denning—Cotton Gin.—Denning Gin Co. has been incorporated, with capital of \$4000, by J. C. Harrod (president), Oscar H. Winn, J. R. Brown and others.

Jackett—Fruit Company.—Chartered: Scott Fruit Co., with capital of \$15,000, and M. V. Scott, president; Joseph M. Hill, vice-president, and C. S. Smart, secretary.

Imboden—Milling.—Imboden Milling Co. has increased capital from \$8000 to \$15,000.

Little Rock—Realty Company.—City Realty Co. has been incorporated, with capital of \$50,000, and De Bradshaw, president; Howard Adams, vice-president; Nal Williams, secretary, and Herman Kahn, treasurer.

Little Rock—Machine Shops.—Aurora Placer Mining Co., organized some months ago with W. H. Anderick, general manager, to handle the process placer machine invented by J. H. Stebbins of Little Rock for separating loose particles of gold from sand without the aid of water, proposes the erection of a factory for manufacturing machines of sufficient size to handle tons of sand a day.

Newport—Mercantile.—Chartered: Newport Grocer Co., with capital of \$100,000, by A. G. Anderson (president) and others.

Taral—Cotton Gin.—Farmers' Gin Co. has been incorporated, with capital of \$3000, and A. P. Bryan, president; D. F. Shinn, vice-president; W. F. Bryan, secretary, and Oscar H. Winn, treasurer.

FLORIDA.

Bagdad—Timber Lands, Saw-mills, etc.—Stearns, Culver & Co. of Ludington, Mich., have purchased entire plant and timber lands at Bagdad of Simpson & Co., mentioned last week.

De Land—Publishing.—Chartered: New Publishing Co., with capital of \$2500, and W. H. Stewart, president; S. B. Wilson, vice-president, and J. F. Adler, secretary.

Lee County—Timber Lands.—Consolidated Naval Stores Co., Jacksonville, Fla., has purchased 100,000 acres of timber lands in Lee county, but will make no developments or improvements for the present.

Miami—Drainage.—Florida East Coast Railway, J. E. Ingraham, third vice-president, St. Augustine, Fla., proposes to drain some of the lands lying between the Everglades and the coast by opening the natural waterways and making canals through prairies that are cultivated by farmers in that section; part of work is to be done by machinery and part by hand labor.

Ocala—Phosphate Mines.—Dutton & Co. of Gainesville, Fla., have purchased and will operate entire properties of Ford & Miller of Ocala, and will reorganize with C. W. Chase, president and general manager; H. F. Dutton, vice-president; J. G. Nichols, secretary, and W. G. Robinson, treasurer.

Pebble—Phosphate Properties.—Joseph Hull of Savannah, Ga., proprietor Prairie Pebble Phosphate Co., who recently acquired plant and property of Land Pebble Phosphate Co., has purchased and will control the McLean properties, consisting of plants of Florida Engineering Co. and Phosphoria Phosphate Co.

Tampa—Pine-products Factory.—Thomas W. Pitts of Gainesville, Fla., will establish plant for reduction of pine wood into useful products, as lately reported; capacity will be forty cords of wood per day; cost \$200,000.

GEORGIA.

Atlanta.—Chartered: Southern College of Pharmacy, with capital of \$5000, and privilege of increasing to \$50,000, by Dr. Hansell Crenshaw and others.

Atlanta—Publishing.—Chartered: South-eastern Underwriter Co., with capital of \$8000, for conducting general publishing business, by Isaac B. Vail of New Hampshire, Orville H. Hall and Virgil Jones of Atlanta.

Blakely—Lumber Mill.—Flowers Bros. Lumber Co. will rebuild saw-mill recently burned at loss of \$15,000.

Brunswick—Brewery.—F. W. Stahl of Jacksonville, Fla., is interested in organization of stock company to establish brewery at Brunswick.

Brunswick—Real-estate Improvement.—Edwin Brounston, E. F. Coney, J. J. Loft and others have incorporated the Glynn Development Co., with capital of \$10,000, for dealing in and improving real estate.

Cartersville—Cotton Mill.—E. L. McClain Manufacturing Co. of Greenfield, Ohio, will build a 25,000-spindle cotton mill at Cartersville. Building will be 125x600 feet in size.

Cedartown—Furnace.—Alabama & Georgia Iron Co., N. H. Swayne, president, has blown in its Cherokee furnace, which has been improved and repaired.

Columbus—Telephone System.—Columbus Automatic Telephone Co., previously reported incorporated for constructing telephone system, has completed organization with capital stock of \$1,000,000 and John T. Norman of Columbus, president; C. B. Lloyd, Toledo, Ohio, vice-president; Frank Hart, Toledo, treasurer, and Geo. R. Young, Columbus, secretary. Company has awarded contract for construction of system to Southern Telephone Construction Co.

Columbus—Bakers' Supplies, etc.—Prudential Manufacturing Co. has been incorporated, with capital of \$10,000, by Augustus M. Althaus, Carl L. Althaus, Max E. Naumann, Carl G. H. Lichtenburg and others, all of Providence, R. I., for manufacture of bakers' and grocers' supplies, carbonated beverages, etc.

Douglas—Electric-light Plant.—Douglas Ice & Power Co. will install electric-light plant.

East Point—Electric-light Plant.—Towns of East Point and College Point contemplate installing electric-light plant, as recently reported. One plant will serve for lighting both towns. Towns may organize company to erect plant or may grant franchise for such a plant. For particulars address R. F. Thompson, mayor, East Point.

Eatonton—Cotton Mill.—Middle Georgia Cotton Mills will add 1800 spindles.

Fitzgerald—Fertilizer Factory.—Phenix Grocery Co., reported lately as erecting warehouse, will install machinery for mixing of fertilizers.

Rome—Foundry.—Co-operative Foundry in North Rome will double capacity.

Rome—Realty Company.—Chartered: Rome Realty Co., with capital of \$30,000, for dealing in real estate, etc., by T. W. Lipscomb, Wright Willingham and Evan P. Harvey.

Savannah—Bleuing Factory.—Southern Blue Manufacturing Co., for manufacture of bleuing, has been established.

Sparks—Electric-light Plant.—R. A. Knights of Adel, Ga., contemplates installing electric-light plant at Sparks.

Sparta—Cotton Mill.—Union Oil Co. of Union Point, Ga., has purchased Sparta Cotton Mills, a plant of 5120 spindles and fifty looms; will improve the mill and put it in operation.

Summerville—Water-works, Sewerage, etc. Town of Summerville, near Augusta, Ga., has voted issuance of \$25,000 of bonds for enlarging and improving water-works and sewerage systems and for street improvements, as recently reported. Address T. I. Hickman, Intendant.

KENTUCKY.

Ashland—Iron Furnace.—Ashland Iron & Mining Co. contemplates making additions to its furnace, but nothing definite has been decided.

Bowling Green—Tobacco Factory.—Bowling Green Tobacco Co. will rebuild factory recently burned.

Bowling Green—Asphalt Plant.—Wadsworth Stone & Paving Co. of Pittsburg, Pa., has commenced erection of extensive asphalt works near Bowling Green.

Cloverport—Asphalt Deposits.—Representatives of McCann, Fitch & Converse of Edinburgh, Scotland, are investigating asphalt properties throughout Kentucky with view to purchasing thousands of acres for development.

Compton—Oil and Gas Wells.—Benjamin Sewell, S. G. Denshel, C. C. Fuels, G. T. Center and others are incorporators of Red River Oil Co., reported recently as incorporated with capital stock of \$1,000,000. Company has oil and gas leases on 4000 acres, and will begin operations at early date.

Hanson—Flour Mill.—C. M. Heulet will erect flour mill with capacity of fifty barrels per day.

Louisville—Mercantile.—Chartered: S. Grabfelder & Co., with capital stock of \$80,000, for dealing in liquors, by Samuel Grabfelder and others.

Louisville—Plow Works.—R. F. Avery & Sons, plow manufacturers, will increase capital from \$382,000 to \$1,400,000 and enlarge plant.

Louisville—Cannery.—Polk Packing Co. has been incorporated, with capital of \$10,000, by J. T. Polk, R. B. Polk, Greenville, Ind.; W. M. McKown, Louisville, Ky., and others.

Louisville—Boiler Works.—Northwestern Steam Boiler Works will begin work at once on rebuilding its plant recently reported burned. Plans have been completed.

Louisville—Machine Company.—American Machine Co. has increased capital from \$50,000 to \$100,000.

Louisville.—Chartered: Bonnie Bros. (liquor dealers), with capital of \$300,000, by W. O. Bonnie and others.

Louisville—Construction.—Kentucky & Indiana Construction Co., with capital of \$10,000, has been incorporated by F. H. Beeman, Louisville; Frank Scheffold, New Albany, and L. T. Bradford, Louisville.

Madisonville—Coal Mines.—Gordon Coal Co. has been incorporated, with capital of \$1000, by W. L. Gordon, J. F. Gordon and M. K. Gordon.

Olympia—Oil Wells.—William O. Fields of Toledo, Ohio, and P. L. Spencer of Louisville, Ky., have leased and will develop oil properties near Olympia Springs.

Princeton—Lead and Zinc Mines.—Princeton Lead & Zinc Co. has been organized, with capital of \$36,000, and John Hollowell, president; John H. Morse, vice-president.

Somerset—Telephone System.—Fishing Creek Telephone Co. has been incorporated by H. B. Newell, J. H. Gibson and O. H. Waddle.

St. Charles—Coal Mines.—Tradewater Coal Mining & Railroad Co. has commenced development of 20,000 acres of coal and mineral lands in St. Charles and Underwood, and will, it is said, expend \$2,000,000.

LOUISIANA.

Eunice—Oil Wells.—Eunice-Crowley Oil Co. has been organized, with capital of \$100,000, and Louis Meyer, president; Gus Fuslier, vice-president, and J. J. Lewis, secretary-treasurer.

Jennings—Oil Wells.—Citizens' Oil Co. has been incorporated for developing oil wells.

Lake Charles—Paper Mill.—Robert Thomas has about completed arrangements for erection of \$300,000 mill to manufacture paper from pine shavings; capacity will be 30,000 pounds of paper per day; buildings will include digester-rooms, three stories, 50x60 feet, washrooms, heater-room, machine-room, boiler and engine rooms.

Maringouin—Oil Mill and Gin.—Theo. Dreyfus, Joseph Wolff and others will erect \$50,000 cottonseed-oil mill and ginnery.

Natchitoches—Land Improvement.—Chartered: Louisiana Land & Immigration Co. has been organized, with capital of \$100,000, for improvement of real estate.

New Iberia—Cotton-oil Mill.—W. R. Burke, as agent, has purchased entire plant of New Iberia Cotton Mill Co.

New Orleans—Trunk Factory.—J. L. Duffy, Jules Aldige, N. Viet and others have incorporated the Duffy Trunk Co., Limited, with capital of \$20,000, for manufacture of trunks and traveling bags.

New Orleans—Steamship Agency.—William J. Hammond and associates have incorporated the W. J. Hammond Company, Limited, with capital of \$10,000, for conducting steamship agency.

New Orleans—Electrical supply Company. Safety Electric Co., Newman & Spranley and Stern & Marks have completed arrangements for consolidating their interests, and will operate as the Interstate Electric Co., Limited, to be incorporated with capital stock of \$1,000,000. It is proposed to operate two electrical supply houses instead of

three, and greatly increase facilities. Chas. Weinberger will be president; Sam Hyman, vice-president; Robert P. Pollock, secretary-treasurer, and P. Stern, general manager.

New Orleans—Ice Plant.—I. A. Alfonso is organizing company for operating ice and cold-storage plant.

Rayne—Syrup Factory and Oil Works.—Syrup factory and oil works will, it is reported, be established. Address W. A. Henslee.

Thibodaux—Land Improvement.—Golden Meadow Development Co. has been organized for developing property in Lafourche parish. W. H. Jung of Dixon, Ill.; J. M. Leffry, Clinton, Ill.; A. J. Thurston, Mendota, Ill., and others are incorporators.

Welch—Oil Wells.—Enterprise Land & Mining Co. is being organized by T. W. Castleman and associates of New Orleans for development of 1000 acres of oil lands near Welch. Mr. Castleman and associates were lately reported as having purchased property for development. Address 113 Bourbon street, New Orleans.

MARYLAND.

Annapolis—Channel.—Navy Department has awarded contract to Maryland Dredging Co. for dredging Severn river at Annapolis, so as to secure 30 foot channel; cost \$100,000.

Baltimore—Stevedoring.—Chartered: Baltimore Stevedoring Co., with capital of \$10,000, by Robert Ramsay, Geo. F. Patterson, James S. Thornton, John Thorpe and others.

Baltimore—Flour Mill.—C. A. Gambrell Manufacturing Co. contemplates enlarging its flour mill and increasing capacity from 600 to 1200 barrels per day. Bids will be asked.

Baltimore—Fertilizer Factory.—Pollock Fertilizer Co., R. H. Pollock, president, has purchased Hazard wharf property at Canton, and will award contracts at once for erection of fertilizer factory and warehouses. Main building will be of brick and steel construction, 200x470 feet, and cost, exclusive of machinery, \$100,000. Company has recently been incorporated, and its president is also president of the Hanover Fertilizer Co. of Hanover, Pa. Address 51 S. Gay street.*

Baltimore—Paper Company.—Robins Paper Co., with capital of \$25,000, has been incorporated by J. Albert Robins, Charles Robins, James R. Paine and others, for dealing in paper bags, novelties, etc.

Baltimore—Brush Company.—Howard Brush Co. has been incorporated under Delaware laws, with capital of \$25,000, by Carus M. Howard, Garrett Loudery and Florence M. Holmes, all of Baltimore.

Baltimore—Power-house.—Pennsylvania Railroad Co. will build two-story stone power-house at North avenue and McMechen street, adjoining Mt. Royal pumping station; company contemplates other improvements, which include erection of depot at Gay and Preston streets and enlargement of Union Station; J. B. Hutchinson, general manager, Philadelphia, Pa.

Baltimore—Steel-car Works, etc.—In accordance with the proposition announced in February, the South Baltimore Car Works, South Baltimore Foundry and Ryan & McDonald Manufacturing Co. will consolidate. They will take the title South Baltimore Steel Car & Foundry Co., with capital of \$1,000,000, and about \$400,000 will be available for improvements. A steel-car works will be added to the wooden-car plant, and the three separate plants will be improved. Charles T. Crane, Farmers and Merchants' National Bank Building, is chairman of committee.

Delta—Slate Company.—Union Trust Co. of Baltimore, Md., is reported as engineering a deal to form company for taking over the slate interests of W. Scott Whitford and Proctor Bros., near Delta, Md. When deal is completed it is said that improvements to the quarries are contemplated.

Hyattsville—Electric-light Plant.—City will vote May 11 on granting franchise to Northern Engineering Co. for installation of lighting system.

Rockville—Wrapper Factory.—Mr. Waldeman of Pennsylvania will establish wrapper factory. Address Rockville Business Men's Association.

Washington, D. C.—Steam Ferry Company. Washington & Alexandria Steam Ferry Co., reported lately as incorporated, will within a few days complete organization, when matters will be taken in hand for construction of steamers, etc., by John Callahan, second vice-president and general manager Norfolk & Washington Steamboat Co.

MISSISSIPPI.

Columbus—Cotton Down.—Incorporated: Southern Cotton Down Co., capitalized at \$100,000.

Gulfport—Woodworking Factory.—Peter

Faquette, operating woodturning and manufacturing plant at Kentwood, La., will remove same to Gulfport and organize stock company to enlarge and operate it.

Jackson.—Chartered: Mississippi Land & Investment Co., with capital of \$50,000, by Charles Whitcomb of Indiana and others.

Kiln—Turpentine Company.—Chartered: Jordan River Turpentine Co., with capital of \$30,000.

Kiln—Lumber Company.—Bayou Talla Lumber Co. has been incorporated, with capital of \$10,000.

Leaf—Drug Company.—Chartered: Leaf Drug Co., with capital of \$5000.

Oxford—Oil Mill.—Oxford Oil Mill has been incorporated, with capital of \$30,000, for erecting cottonseed-oil mill recently reported. B. T. Kimbrough, S. H. Plant, F. M. Stowers and T. H. Somerville are incorporators.

Tunica—Land Company.—Chartered: Stimpson Land Co., with capital of \$40,750.

MISSOURI.

Carthage—Oil and Mineral Land Development.—Missouri Land & Development Co. has been organized, with capital stock of \$10,000, by Boston parties, and with principal offices at Boston, Mass., for development of 70,000 acres of oil, gas and mineral lands acquired in Southwest Missouri.

Higginsville—Flour Mill.—Eagle Mill & Grain Co. has contracted for remodeling its mill to the swing-sifter system.

St. Joseph—Realty Company.—Fairleigh Realty Co., with capital of \$60,000, has been incorporated by Wm. G. O'Neill and W. G. Fairleigh, Jr.

St. Louis—Manufacturing.—Chartered: Riverside Pool & Billiard Table & Manufacturing Co., with capital of \$100,000, by Oliver Funsch, H. J. Ortois and Joseph Zentner.

St. Louis—Tea and Coffee.—Chartered: Ideal Coffee & Tea Co. has been incorporated by Charles P. Luhn, Chas. Schlog and others.

St. Louis—Fire-clay Company.—Sclanng Fire-Clay Co. has been incorporated, with capital of \$3000, by A. J. Hutchinson, W. F. Martin, R. H. Orr and others.

St. Louis—Cleaning and Waterproofing Company.—Chartered: Zepp Cleaning & Waterproofing Co., with capital of \$2000, by James O. Friel, S. H. Brickey, M. E. Smith and others.

St. Louis—Electric Company.—Guarantee Electric Co., with capital of \$6000, has been incorporated by C. J. Briner, F. E. Briner, L. T. Noller and others. Address C. J. Briner, 204 Franklin avenue.*

St. Louis—Sanitarium.—Chartered: Missouri Sanitarium Co., with capital of \$10,000, by L. H. Sanford, M. Haymes and others.

St. Louis—Stave and Mercantile Company. Robert Welch Stave & Mercantile Co. has been incorporated, with capital of \$20,000, by Robert Welch, H. J. Cantwell, T. F. Blount and others.

St. Louis—Milling.—Chartered: Hunter Bros. Milling Co., with capital of \$50,000, by Edw. O. Hunter, C. L. Reed, Julius W. Cohn and others.

St. Louis—Carbonating Manufacturing Company.—Chartered: Central Carbonating Manufacturing Co., with capital of \$6000, by F. H. Ameling, C. C. McCann, T. L. Ameling and others.

St. Louis—Construction.—Chartered: Geo. A. Fuller Construction Co., with capital of \$10,000, by O. G. Selden, B. B. Burns, Chas. J. Franklin and others.

St. Louis—Car Works.—St. Louis Car Co. has increased capital to \$1,500,000 and purchased entire plant of Laclede Car Co.

St. Louis—Mercantile.—Pope Mercantile Co. has been incorporated, with capital of \$200,000, by E. O. Pope and others.

St. Louis—Realty Company.—Ashland Realty Co. has been chartered, with capital of \$50,000, by B. A. Suppan, O. E. Buder and others.

NORTH CAROLINA.

Charlotte—Bakery.—Haas Bros. have purchased and will operate bakery of W. A. Brooks.

Charlotte—Gas Plant.—Charlotte Consolidated Construction Co. has awarded contract for installation of new gas plant.

Durham—Brick Works.—A. Max will change location of and increase capacity of his brick works.

Elizabeth City—Ice Plant.—M. N. Sawyer, Fred Davis and C. W. Grice have purchased and will operate the Baxter ice plant.

Gastonia—Cotton Mill.—Trenton Cotton Mills, previously reported as having contracted for additional spindles, etc., is filling up unoccupied space by installing 3088 spindles and other machinery. About \$25,000 is being expended.

Jonesboro—Cotton Mill.—Clark Manufacturing Co. has been incorporated to establish cotton mill; capital stock \$100,000. David Clark is president, and W. A. Graham Clark of Raleigh, treasurer.

Kinston—Water-works, etc.—City has voted affirmatively issue of \$150,000 of bonds for water-works, sewerage and street improvements, previously reported. Address "The Mayor."

Kinston—Lumber Mills.—Yellow Pine Manufacturing Co. has been incorporated, with capital of \$1500, and privilege of increasing to \$50,000.

Lumberton—Cotton Mill.—It is reported that Lumberton Cotton Mills will add 5000 spindles.

Lumberton—Hardware Company.—Chartered: McAllister Hardware Co., with capital of \$1500, by J. A. McAllister and others.

Lumberton—Ice and Cold-storage Plant.—Company with capital of \$20,000 has been organized for building ice factory and cold-storage plant. Address R. E. Lee.

Red Springs—Lumber Company.—Hall & Livermore Lumber Co. has been incorporated, with authorized capital of \$50,000, by R. W. Livermore, George H. Hall, Henry W. Livermore and Geo. H. Hall, Jr.

Spencer—Real Estate.—Spencer Investment Co. has been incorporated, with capital of \$20,000, for conducting real estate, etc., business, by D. J. Miller, L. H. Stewart, S. I. Spiggle and others.

Statesville—Cotton Mill.—H. A. Yount of New Sterling, N. C.; A. B. Saunders of Statesville, N. C., and Charles Webb & Co. of Philadelphia, Pa., have incorporated Bloomfield Manufacturing Co., with capital of \$100,000, to establish cotton mill.

Statesville—Cotton Mill.—A company will be organized to build the 5000-spindle yarn mill which rumors recently stated the Statesville Cotton Mills contemplated erecting. Wm. Wallace, T. D. Miller and others of Statesville Cotton Mills will be the stockholders.

Waxhaw—Oil Mill and Ginnery.—Company has been organized, with capital of \$20,000, and H. W. Broom, general manager, for erecting 20-ton cottonseed-oil mill.*

Wilmington—Metal Works.—Standard Supply Co. has been incorporated for manufacturing machinery, electrical appliances and all kinds of metal products, by H. A. Burr, Fred S. Burr and Theodore F. Jackson.

Wilmington—Water-works Improvement.—Clarendon Water-Works Co. will install new pump with capacity of 2,750,000 gallons of water per day at its Hilton station; cost \$5000, exclusive of additional boiler and other facilities which have been installed.

Wilmington—Shingle Mill.—New Hanover Shingle Mills, reported recently as incorporated, has shingle mill in operation, and will increase capacity to 50,000 shingles per day.

SOUTH CAROLINA.

Central—Cotton Mill.—Issaqueena Mills, recently reported incorporated with \$200,000 capital, has organized with D. K. Norris, president and treasurer. A plant of 10,000 spindles and 325 looms, with steam-power, will be built. O. A. Robbins of Charlotte, N. C., is engineer in charge.

Charleston—Mining.—Magnolia Mines Co. has been incorporated, with capital of \$300,000, by George P. Howell and J. M. Sears, for developing mineral lands of all description.

Greenville—Tobacco Company.—Colleton Tobacco Co. has been incorporated, with capital of \$1500, by J. E. Peurifoy, E. H. Williams, C. A. Savage and others.

Iva—Cotton Mill.—D. C. Brown of Anderson, S. C., is organizing \$200,000 company to build cotton mill at Iva. A plant of 10,000 spindles and 300 looms, for manufacturing fine cloth, is proposed.*

Pendleton—Cotton Mills.—M. M. Hunter, J. J. Sippon, E. G. Evans, Jr., and W. J. Martin have incorporated Pendleton Cotton Mills, with capital of \$65,000, to establish plant.

Salley—Cotton Mill.—A \$100,000 company is being organized to build cotton mill. W. S. Peterson can be addressed for information.

TENNESSEE.

Bridgeport—Flour Mill.—M. B. Ketner of Victoria, Tenn., will erect 50-barrel flour mill and 150-bushel cornmeal mill at Bridgeport.

Chattanooga—Electric-power Plant.—Samuel Jenkins of Chattanooga and Northern parties are reported as organizing \$600,000 stock company for building electric-power plant for operating street railway, lighting city and furnishing manufacturing enterprises with power, etc., and for development of about 800 acres of coal lands on Walden's Ridge.

Chattanooga—Mining Drills.—Nixon-Ratch Mining Drill Co. will improve works at cost of \$10,000; improvements include installation of additional machinery for doubling capacity and erection of one-story brick machine shop 50x100 feet and blacksmith shop 25x40 feet.

Chattanooga—Hardware Specialties.—American Manufacturing Co., manufacturer of hardware specialties, will erect additional buildings for increasing capacity.

Chattanooga—Iron Works.—Wheeling Corrugating Co. is making extensive improvements, including erection of additional \$10,000 brick building and installation of additional machinery; company manufactures plate, roofing and galvanized iron fixings.

Johnson City—Planing Mill.—S. W. Sells and associates have purchased planing mill of G. C. Harris, and will operate under name of S. W. Sells & Co.

Knoxville—Slate Quarries.—Knoxville Slate Co., reported recently as incorporated with capital of \$50,000, has completed organization, electing W. D. Hamilton of Zanesville, Ohio, president; company will begin erection at once of plant for developing slate quarries in Blount county.

Knoxville—Lime-kiln.—Gossett & Co. have erected and put in operation four large lime-kilns.

Knoxville—Zinc Mines.—Holston Zinc Co., recently reported as organized with capital of \$50,000, will operate the Flat Creek zinc property and erect mill with capacity of 200 tons in twenty-four hours. Engineer in charge of work is Frank J. Smith, Mascot, Tenn. Company will not operate Roseberry Zinc Co.'s property, as was reported as probable.

La Follette—Timber Lands.—F. G. Brown and associates have purchased from La Follette Coal, Iron & Railway Co., B. D. Bartlett and others 10,000 acres of timber lands, and will build mills for development.

Memphis—Boiler Works.—Dan Shea Boiler Works is erecting additional building for increasing capacity.

Memphis—Power-house.—Memphis Street Railway Co. will make extensive improvements, including erection of new power-house.

Memphis—Ice and Cold-storage Plant.—Charles Zilker of Allegheny, Pa., who previously purchased property in Memphis, has, with others, organized the Tennessee Ice & Cold Storage Co. and is erecting building of brick 80x83 feet, in which will be installed 100-ton ice plant; cold-storage department will have capacity for thirty cars. W. W. Johnson, recently of San Antonio, Texas, will be general manager.

Memphis—Shoe Factory.—Carruthers-Jones Shoe Company will establish factory with capacity of 600 pairs of shoes per day.

Memphis—Artificial-stone Plant.—Memphis Hydraulic Stone Co. has been organized, with capital of \$8000, by Steve M. Wright, Edwin Fraser, Geo. E. Goff, E. J. Claypool and W. H. Fisher, for establishing artificial-stone works reported last December as contemplated by W. H. Fisher of Los Angeles, Cal.

Murfreesboro—Bottling Works.—Murfreesboro Bottling Works has been incorporated, with capital of \$15,000, by V. M. White, Patrick C. Dooley, J. B. Huggins and others.

Nashville—Construction Company.—Nashville Building Co. has been incorporated, with capital of \$20,000, by W. H. Robeson, A. N. Chandler, Hardin Rowan and others.

Nashville—Improvements.—Lowest bidders for extensive improvements to be made on property of Murphy Land Co. are as follows: Foster & Creighton, for extending Lick Branch sewer, \$39,685; for lateral sewers, Nashville Plumbing Co., \$6682; grading and macadamizing streets, Foster & Creighton, \$3232; 30-inch radiating sewer, Nashville Plumbing Co., \$2000; laying water mains, Nashville Plumbing Co., \$1471.

Pikeville—Timber Lands.—James H. Cranwell Lumber Co., which recently purchased 6000 acres of timber lands, is making arrangements for erection of saw-mills for developing the property.

Sparta—Furniture Factory.—Company is being organized for establishment of furniture factory. Address W. H. Magness.*

Sparta—Boat Company.—Sparta Boat Co. has been incorporated by E. R. Merriman, S. S. Dibrell, R. B. Tubb and others, with capital of \$5000.

Whiteside—Coal Mines.—New Aetna Coal Co. will install additional machinery for increasing output of its Whiteside mines from 500 to 1000 tons per day. Telephone system is also being installed and other improvements made. This item was reported recently under Chattanooga, Tenn.

TEXAS.

Alpine—Mercantile.—Chartered: Kincaid-Altgelt Company, with capital of \$60,000, by W. D. Kincaid, E. J. Altgelt and others.

Atlanta—Oil Mill.—Mr. Blackman of Ladonia, Texas, is interested in erection of cottonseed-oil mill at Atlanta.

Austin—Bottling Works.—Star Bottling Co. has been incorporated, with capital of \$2500, by E. E. Smith, Noyes D. Smith, H. A. Wood and others.

Beaumont—Telephone Company.—Beaumont Northeastern Telephone Co. has been incorporated, with capital of \$10,000, by J. M. Smith of Beaumont, W. S. Bruer of Kountze and Tony Ruffs of Nacogdoches.

Beaumont—Refinery.—It is reported that H. G. Bayne of New York has purchased the refineries of George A. Burt at Beaumont.

Beeville—Pickling Plant.—L. D. Price of San Antonio, Texas, will establish pickling plant at Beeville.

Brenham—Cannery.—J. G. Darden, representing United States Canning Co., is investigating with a view to establishing cannery at Brenham. Address care of Commercial Club.

Cameron—Cannery.—W. G. Darden of Chicago, Ill., representing United States Canning Co., is investigating with view to organizing company to establish cannery at Cameron. T. S. Henderson, J. H. Bickett, Ed Sanders of Cameron are also interested.

Dallas—Paper Company.—A. G. Elliott Paper Co., A. G. Elliott, president, has had plans prepared for erection of four-story brick and stone building 60x200 feet, of fire-proof construction, to cost \$60,000.

El Campo—Hay Company.—El Campo Hay Co. has been incorporated, with capital of \$10,000, by J. B. Holloway, W. J. Hefner and Chas. Samuelson.

El Paso—Extract Factory.—Chartered: El Paso Vinegar, Cider & Extract Co., with capital of \$5000, by S. L. Goodman, Jake Kaufman and A. Schwartz.

Flatonka—Kaolin Deposits.—It is reported that plant will be erected to utilize the kaolin deposits found in and around Flatonka. M. Cockrill can probably give particulars.

Fort Worth—Live-stock Company.—National Live-Stock Co. has been incorporated, with capital of \$100,000, by R. H. McNutt, J. F. Hovenkamp, James D. Farmer and others.

Fort Worth—Real Estate.—Fort Worth Development Co. has been incorporated, with capital of \$50,000, for conducting real-estate business, by George Mulkey, W. H. Edrington and John C. Ryan.

Fort Worth—Piano Company.—Chartered: Henderson Piano Co., with capital of \$20,000, by W. M. Sanborn and others.

Fort Worth—Mercantile.—Chartered: R. H. Griffin & Co., with capital of \$10,000, by R. H. Griffin and others.

Fort Worth—Starch Company.—Queen Quality Starch Co. has been incorporated, with capital of \$10,000, by W. N. Gaither, John S. Wells and Nat Gaither for manufacture of starch and laundry supplies.

Galveston—Drug Company.—Chartered: E. A. Neblett Company, with capital of \$8000, by E. A. Neblett and others.

Greenville—Mattress Factory.—Greenville Mattress Co. is rebuilding factory recently burned; capacity fifty mattresses per day.*

Hallettsville—Bridges.—City has decided by popular vote to issue \$25,000 of bonds for bridge purposes. Address "The Mayor."

Honey Grove—Mercantile.—Chartered: Blake-Fowler Company, with capital of \$10,000, by J. P. Blake and others.

Houston—Oil Wells.—Bonner Oil Co. has been incorporated, with capital of \$100,000, and J. S. Bonner, president; E. J. Mantooth, vice-president; B. H. Brown, secretary, and R. W. Wier, treasurer.

Marshall—Car Foundry.—Marshall Car Wheel & Foundry Co. is enlarging by erection of additional brick building 50x75 feet.

Richmond—Navigation.—Richmond-Galveston Navigation Co. has been incorporated, with capital of \$10,000, by F. A. Dempster, E. F. Beaumont, F. Wessel of San Antonio and T. D. Wessendorf of Richmond.

San Antonio—Coal and Coke Company.—Monclova Coal & Coke Co. has been incorporated, with capital of \$100,000, by Robert T. Hill of Washington, D. C.; R. H. McCracken, Theodore Harris and Duval West of San Antonio.

San Antonio—Ice-cream Company.—Acme Ice Cream Co. has been incorporated, with capital of \$20,000, by J. H. Holmgren, E. A. Holmgren and George C. Holmgren.

San Diego—Gin and Grist Mill.—San Diego Gin & Milling Co. has been incorporated,

with capital of \$10,000, by Julian Palacios, L. Levy, S. H. Woods and others.

Sherman—Telephone Company.—Grayson County Telephone Co. has increased capital from \$170,000 to \$340,000.

Sweetwater—Cotton-oil Mill.—Sweetwater Cotton Oil Co. is name of company reported recently as being organized, with capital of \$60,000, and R. L. McCauley, president, for erection of cottonseed-oil mill.

Taylor—Cotton Mill.—L. H. Goldstein, T. W. Marse, Daniel Murphy and others propose organizing the cotton-mill company mentioned last week. A capital of \$100,000 is contemplated.

VIRGINIA.

Chase City—Stave and Heading Factory.—B. F. Border & Co. will establish stave and heading plant; buildings are being erected.

Danville—Reservoir.—Charles Orchard has contract for construction of 1,000,000-gallon reservoir reported last week. Dan River Power & Manufacturing Co. will own the reservoir.

Fredericksburg—Silk Mill.—Klots Throwing Co. contemplates enlarging its silk mill.

Fredericksburg—Shoe Factory.—D. B. Edinger has made proposition for organization of \$25,000 stock company to establish shoe factory.*

Fredericksburg—Road Improvement.—Spottsylvania county will issue \$100,000 of bonds for macadamizing and grading roads. Address "County Clerk."

Lynchburg—Bakery.—W. A. Brooks of Charlotte, N. C., will establish bakery and confectionery plant at Lynchburg.

Lynchburg—Road Improvements.—Bill will be introduced in legislature authorizing Campbell county to issue \$200,000 of bonds for macadamizing roads. Address board of supervisors.

Lynchburg—Telephone System.—Campbell County Telephone & Development Co. has awarded contract for construction of telephone system from Lynchburg through Campbell county to connect with telephone system of Charlotte county.

Newport News—Road and Bridge Improvements.—Warwick county will vote on issue of \$35,000 of bonds for road and bridge improvements. Address "County Clerk."

Richmond—Lighting Plant.—Samuel Cohen and associates have petitioned city council for franchise to erect and operate co-operative electric-light plant.

Staunton—Cannery.—Hugh C. Braxton, Jos. P. Davis and Michael Kivlighan have been appointed a committee to investigate the advisability of establishing cannery.

WEST VIRGINIA.

Anthony—Lumber Mills.—Henderson Lumber Co., reported recently as incorporated, will improve and enlarge its plant, increasing capacity to 30,000 feet per day.*

Anthony—Lumber Company.—J. I. Henderson is president-treasurer; John U. Henderson, vice-president, Anthony, W. Va.; Thos. W. Bond, Orange, Va., and J. E. Scaggs, Charleston, W. Va., secretaries Henderson Lumber Co., reported recently as incorporated.

Bluefield—Printing.—Bluefield Printing & Manufacturing Co., for conducting general printing and manufacturing business, has been incorporated, with capital of \$10,000, by H. B. Kitts, A. W. Howard, R. C. Turner and others.

Bluefield—Coal Mines.—Rawl Coal & Coke Co. has been incorporated, with capital of \$100,000, by H. C. Jones, O. C. Jenkins, L. A. Wilson and Geo. S. Saunders.

Bonner—Coal Mines.—C. C. Sharp of Bonner and J. F. Stone of Columbus, Ohio, have purchased for development about 20,000 acres of coal land on Gauley river.

Bramwell—Coal Mines.—Howard Colliery Co. has been incorporated, with capital of \$100,000, by F. L. Schoew, K. F. Schoew, W. D. Tyler, R. G. Bryant and others.

Cameron—Plumbing, etc.—Chartered: West Virginia Plumbing & Supply Co., with capital of \$25,000, by J. G. Crawford, R. H. Hess and others.

Charleston—Mercantile.—Chartered: J. M. Neil Company, to deal in nursery stock, with capital of \$10,000, by Joseph M. Neil, Robert C. Bell, James B. Menager and others. Address Box 475.*

Charleston—Woolen Mills.—Frank Woodman, Harry L. Minsker, Solomon Minsker and others have incorporated Kanawha Woolen Mills for manufacturing woolen cloth; capital is \$50,000.

Charleston—Mining.—Chartered: Wampum Mining Co., with capital of \$1000, by Charles P. Outhwaite, H. G. Warden, J. M. Bennett and others, all of Columbus, Ohio.

Eckman—Coal Mines.—Sphinx Collier Company, with capital of \$10,000, has been incorporated by G. F. Lucado, J. R. Gilliam, Lynchburg, Va.; P. P. Flanagan, Eckman, and others.

Elkins—Mining.—Mae Mining Co. has been incorporated for conducting general mining business, with capital of \$50,000, by Daniel F. McMullen and James Barrett of Frostburg, Md.; Hugh A. McMullen of Cumberland, Md., and Andrew Hogg of Womelsdorf, W. Va.

Fairmont—Development.—Chartered: Fairmont Development Co., with capital of \$15,000, for dealing in real estate, erecting dwellings, manufacturing brick, etc., by Wilbur H. Veach, John C. Hallam, John M. Hagerty and others.

Fairmont—Lumber Company.—Lewis & Brooks Lumber Co. has been incorporated, with capital of \$25,000, by G. S. Lewis of Clarksburg, W. Va.; H. C. Brooks, F. L. P. Brooks and F. J. Brooks of Fairmont.

Grafton—Machine Shops.—Baltimore & Ohio Railroad Co., Geo. L. Potter, Baltimore, Md., general manager, is reported as having had plans made for enlarging and improving its Grafton shops at cost of \$60,000.

Hinton—Mercantile.—Chartered: Smith, Whitman & Co., with capital of \$10,000, by James F. Smith and others.

Keyser—Woolen Mill.—Jacob E. Patchen will erect building 180x195 feet and install machinery for manufacturing woolen cloth.

Morgantown—Coal Mines.—Morgantown Coal Co. will erect plant of 300 tons per day capacity for developing its 3000 acres of coal lands near Morgantown. Company has offices at 1031 Schofield Building, New York. H. B. Hersey is secretary.

Moundsville—Coal Mines, Coke Ovens, etc.—Round Bottom Coal & Coke Co. has been incorporated, with capital of \$25,000, by J. W. Wiley, W. S. Hall and John Kritschim, all of Scottsdale, Pa.

Paden Valley—Steel Plant, etc.—The Paden Valley Company, reported recently as incorporated with capital of \$300,000 by Charles L. Woodridge, Robert Miller, Geo. R. Wallace of Pittsburg, Pa.; John P. Gangwisch of Grafton, W. Va., and others, has purchased 250 acres of land in the Paden valley, where it will establish a manufacturing town. Sheet mill to roll iron sheets, bar mill, horse shoe plant and 10-pot glass factory will be erected at once. Pittsburg Construction & Engineering Co., Twenty-seventh street and Liberty avenue, Pittsburg, Pa., will have charge of engineering.

Parkersburg—Ice Factory.—Springdale Ice Co. has been incorporated, with capital of \$25,000, for manufacture of ice, by Michael Dare, H. C. Vaughan and others.

Parkersburg—Oil Company.—Pittsburg & Parkersburg Oil Co. has been incorporated for development of oil and gas lands, with capital stock of \$1,000,000, by J. W. Adams, A. C. Scarber, Nathan Salser of Cleveland, Ohio; C. A. Neidhart and A. S. Bosley of Pittsburg, Pa.

Parkersburg—Development Company.—Midway Development Co., with capital of \$24,000, for dealing in and improving real estate, has been chartered by H. H. Moss, W. E. White, Mason G. Ambler and others.

Parsons—Telephone System.—Parsons Telephone Co. has been incorporated, with capital of \$10,000, by J. B. Jenkins, Albert, W. Va.; A. C. Helmick, Thomas; Riley Harper, J. P. Scott and W. M. Clayton of Parsons.

Princeton—Coal Mines.—Chartered: Hiawatha Coal & Coke Co., with capital of \$25,000, by H. W. Stacey, A. W. Reynolds and others.

Welch—Coal Mines.—Chartered: McClaren Coal & Coke Co., to mine coal, manufacture coke, etc., by Geo. E. Crane, Hugh L. Runkle, Oregon E. Rhodes of Kenton, Ohio; W. J. McClaren and Ernest J. Howe of Welch and others.

Wheeling—Electric Construction Company. Chartered: Gee Electric Construction Co., with capital of \$50,000, by H. M. Gee, W. W. Eckhardt, A. A. Wheat and others.

Wheeling—Furnace, etc.—La Belle Iron Works has issued 10,000 shares of additional stock, and will make extensive improvements, which include enlargement of its present furnace, erection of a new furnace at cost of \$600,000, and opening up and development of additional ore properties recently purchased.

Wheeling—Coal Mines and Coke Ovens.—Wheeling Coal & Coke Co. has been incorporated, with capital stock of \$2,000,000, by E. L. Denny of Waynesburg, Pa.; C. L. Hibbs, J. H. Lynn, Uniontown, Pa.; B. F. Hibbs, Brownsville, Pa.; W. S. Laidley, Carmichael, Pa., and others, for developing 70,000 acres of coal lands in Marshall county and erecting large coke-producing plant.

Wheeling—Electric-light Plant.—Bader & Maurer have awarded contract for installation of electric-light plant.

Williamstown—Real Estate.—Williams-town Investment Co. has been incorporated, with capital of \$20,000, for dealing in real estate, etc., by Samuel H. Plumer, Chas. A. Ludey, O. Brent Gard, Marietta, Ohio; James Griffen, Williamstown, and others.

OKLAHOMA TERRITORY.

El Reno—Water-works Improvement.—El Reno Water Co. contemplates extending and improving plant by installing electrically-driven pumps, its present project to install suitable pumping units for 30-horse-power electric motors.*

Foss—Mercantile.—Chartered: Lawson Mercantile Co., with capital of \$20,000, by W. J. Lawson and others.

Gilbert—Oil and Gas Wells.—Gilbert Gas, Oil, Coal & Mineral Co. has been incorporated, with capital of \$25,000, by R. B. Cochran, J. C. Collins, F. H. Gilbert and others.

Guthrie—Oil and Gas Company.—Newark Oil & Gas Co. has been incorporated, with capital of \$500,000, by O. P. Hanson of Parsons, Kan.; W. E. Dixon, Cherryvale, Kan.; Fred Ritterbush, Guthrie, O. T., and others.

Leger—Mill Company.—Leger Mill Co. has been incorporated, with capital of \$25,000, by C. M. Jackman, L. F. Rhode and C. C. Hightower.

Oklahoma City—Hardwood Factory.—William Schmidt of Chicago, Ill., has made proposition to Chamber of Commerce for erection of four-story stone and brick factory 60x120 feet for manufacture of hardwood interior finishings to cost not less than \$50,000.

Oklahoma City—Townsite Company.—South & West Townsite Co. has been incorporated, with capital of \$10,000, by G. A. Orcutt, C. E. Bullard of Snyder, O. T.; L. H. Lee of Oklahoma and others.

Pawhuska—Water-works Improvements.—Bids are being asked at Osage Indian Agency for repairing reservoirs and cisterns and building two filters at Osage Boarding School.

Stroud—Water-works.—Construction of system of water-works is talked of. Address "The Mayor."

BUILDING NOTES.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Aberdeen, Miss.—Lodge Building.—S. H. Berg has contract for new building reported lately to be erected by Aberdeen Lodge, No. 620, B. P. O. E.

Atlanta, Ga.—Depot and Office Building.—Plans of P. Thornton Mayre of Washington, D. C., have been accepted by Atlanta Terminal Co., J. W. English, president, for erection of proposed union depot and office building previously reported to be erected at cost of \$500,000. Chief Engineer H. M. Steele of Central of Georgia Railway Co. has been selected chief engineer of the Terminal Company, and new depot will be built under his direction.

Baltimore, Md.—Dwellings.—J. W. Sindall has contract for erecting fourteen two-story brick dwellings for Daniel Donnelly at cost of \$15,000.

Baltimore, Md.—Business Building.—Plans have been completed and estimates are being made on proposed addition to laboratory of Sharp & Dohme, previously reported.

Baltimore, Md.—Church.—Plans of J. E. Lafferty have been accepted for Immanuel Baptist Church, previously reported; Dr. Madison C. Peters, pastor.

Baltimore, Md.—Dwellings.—J. C. German will erect ten two-story brick and stone dwellings to cost \$8000.

Baltimore, Md.—Courthouse Addition.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will receive sealed proposals until May 26 for fireproof one-story addition to the old United States courthouse, Baltimore, in accordance with drawings Nos. 1, 2 and 3 and specifications, copies of which may be had on application to above office or at office of the custodian.

Baltimore, Md.—Apartment-house.—T. Buckler Ghegnier is preparing preliminary plans for erection of \$50,000 apartment-house.

Baltimore, Md.—Dwellings.—Mrs. Elizabeth Livermore has let contract to Contractor Garrock of Highlandtown to erect six two-story brick and stone dwellings at cost of \$10,000.

Baton Rouge, La.—Hotel.—Palestine Archi-

fectural Co. of New Orleans, La., has contract at \$85,700 for erecting Ostrouma Hotel; contract includes electric plant, water-works, refrigerating plant and steam laundry.

Beaumont, Texas.—School Building.—Plans of Glenn Allen of Waco, Texas, have been accepted for high-school building previously reported. Bids will be called for at once and contract awarded; cost not to exceed \$65,000.

Birmingham, Ala.—Y. M. C. A. Building.—Young Men's Christian Association is endeavoring to raise \$100,000 for purchase of site and erection of new building. No plans have been prepared as yet.

Brunswick, Ga.—Church.—First Methodist Church, Dr. J. W. Malone, pastor, will build \$20,000 brick structure.

Camden, Tenn.—Depot.—Nashville, Chattanooga & St. Louis depot, recently burned, will be rebuilt; J. W. Thomas, Jr., general manager, Nashville, Tenn.

Centerville, Md.—Bank Building.—James McAllen of Princess Anne, Md., has contract at \$15,000 for erecting building of Centerville National Bank, previously reported.

Centerville, Md.—Store Building.—James McAllen of Princess Anne, Md., has contract for erecting proposed \$5000 Kahn store building previously mentioned.

Chattanooga, Tenn.—Church.—Christ Church will erect brownstone structure. Address "The Pastor."

Chattanooga, Tenn.—Library.—Plans of Architect Downing have been accepted for proposed Carnegie building; cost of building will be \$45,000. For particulars address President A. N. Shoun.

Chattanooga, Tenn.—Clubhouse.—Mountain City Club will erect new building. For particulars address H. S. Probasco.

Cordale, Ga.—School.—City will vote June 2 on issue of \$15,000 of bonds for erection of brick and stone school building. Address R. L. Wilson, mayor.

Elizabeth City, N. C.—Business Building.—J. W. Jones of Norfolk, Va., has contract at \$20,000 for erecting proposed business building at Elizabeth City for Chas. H. Robertson.

Fort McPherson, S. C.—Buildings.—Four new buildings will be erected at United States barracks, Fort McPherson, at cost of about \$200,000. Contract will be awarded within a few weeks.

Fort Myer, Va.—Gymnasium.—Capt. W. F. Clark, quartermaster, will receive proposals in triplicate until May 29 for construction of gymnasium. United States reserves usual rights. Information furnished on application.

Hagerstown, Md.—Hall.—Hagerstown Lodge, B. P. O. E., will erect three-story hall 4x150 feet.

Jackson, Miss.—Store Building.—Jones-Kanington Dry Goods Co. will erect department store building, as lately reported, six stories, 80x100 feet. Architect has not been engaged and no contracts awarded.

La Grange, Ga.—Courthouse.—Board of county commissioners, C. H. Griffin, chairman, will open bids July 13 for furnishing material and labor necessary for completion of a new courthouse in accordance with plans and specifications prepared by Andrew J. Bryan & Co., 1104 Hemen Building, New Orleans, La. Each bid must be accompanied by certified check for \$10,000. Bidders can secure plans, specifications and blank forms of proposal from architects. Bond required and usual rights reserved.

Lexington, Ky.—Bank and Office Building.—Security Trust & Safety Vault Co. will erect \$100,000 bank and office building. Bids will be asked shortly.

Lindale, Ga.—Opera-house and Armory.—Massachusetts Mills in Georgia will erect \$20,000 opera-house and armory.

Little Rock, Ark.—Monument.—B. W. Green, chairman committee, Arkansas Division of United Confederate Veterans, will open bids May 11 for monument to be erected to the Confederate dead. Designs and specifications to be furnished by contractor, and bid for each design and specification must accompany same; cost not to exceed \$10,000; bond required and usual rights reserved.

Louisville, Ky.—Residences.—Mason Maury has made plans for two dwellings for H. A. Dunersull.

Louisville, Ky.—Store Building.—M. Q. Wilson has made plans for store building for Conrad Shor Co.

Macon, Ga.—Rectory.—St. Paul's Episcopal congregation will build new rectory; Rev. John M. Northrop, pastor.

Manchester, Ky.—Bank Building.—Manchester Bank, I. S. Manning, president, will erect \$5000 building.

Mannington, W. Va.—Opera house.—Char-

tered: Star Opera House, with capital of \$100,000, by T. S. Rymer, Wm. Rymer, J. B. McLure and others.

Meridian, Miss.—College.—East Mississippi Female College, recently burned and reported to be rebuilt, will be three stories, of mill construction, and contain all modern improvements, including electric lights, steam heat, etc.; will operate under name of Meridian Female College, to be incorporated with capital of \$100,000. Address J. W. Beeson, president.

Mobile, Ala.—Bank Building.—Sidney Lowenstein has awarded contract to George A. Robinson Contracting Co. at \$50,000 for erection of proposed three-story stone bank building 55x135 feet.

Montgomery, Ala.—Courthouse and Postoffice Extension.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids June 1 for construction (except heating apparatus) of extension of United States courthouse and postoffice building at Montgomery, in accordance with drawings and specifications, copies of which may be had at above office or at office of custodian, Montgomery.

Morehead, N. C.—Bank Building.—Bank of Carteret, R. W. Taylor, president, will erect bank building.

Mt. Savage, Md.—Church.—Wright Butler of Cumberland, Md., has prepared plans and F. Mertens & Sons of Cumberland have contract for erecting St. George's P. E. Church at Mt. Savage, recently reported; cost \$10,000, exclusive of furniture.

Nashville, Tenn.—Office Building.—Investigations are reported as being made for erection of \$750,000 office building by J. K. Newman, G. W. Bacon and B. S. Guinness of New York, E. A. Guinness of London, England; E. B. Stahlman, A. M. Shook and Percy Warner of Nashville.

Norfolk, Va.—Club.—Tyree & Leadbetter have contract at \$7500 for erecting new clubhouse for Hampton Roads Club, previously reported.

Northfork, W. Va.—Hall.—Algoma Lodge, No. 94, A. F. and A. M., will move from Algoma to Northfork and erect two-story building; L. H. Clark, D. M. Junkin, L. G. Toney, C. W. Wright and E. L. Stafford, building committee.

Parkersburg, W. Va.—Masonic Temple.—Masonic Temple Association has been incorporated for erecting Masonic temple building, by J. M. Jackson, Jr., trustee, and others.

Richmond, Va.—Hotel.—Arrangements have about been completed and contract will be awarded in a few days for erection of Mrs. A. D. Atkinson's hotel, previously reported.

Roland Park, Md.—Residence.—Prof. G. Emory Morgan will have plans made for residence.

Roland Park, Md.—Residence.—Ellcott & Eumart will prepare plans for residence for John McKenzie.

Salisbury, Md.—Bank Building.—Salisbury National Bank will receive bids until June 1 for erection of new brick and stone bank building. Plans were prepared by Jackson C. Gott of Baltimore, Md.

Savannah, Ga.—Officers' Quarters.—New officers' quarters and guardhouse will be erected at once at Fort Screven at cost of about \$100,000. Lieutenant Orr will within short time advertise for bids for construction of a part of proposed new quarters.

Shelbyville, Ky.—Opera-house.—Chartered: Shelbyville Opera House Co., with capital of \$10,000, by E. T. Bland, John H. Hartford, B. F. Pemberton and others.

St. Louis, Mo.—Business Building.—Paul Brown will erect for the Moffitt-West Drug Co. five-story brick, terra-cotta and granite building with all modern improvements, to cost \$200,000.

St. Louis, Mo.—Apartment-house.—Spelden & Spelden are preparing plans for four-story apartment house for E. M. McComas.

Washington, D. C.—Bank Building.—Second National Bank has let contract to Prescott & Co. for alterations and improvements to its building.

Washington, D. C.—Lodge Building.—Royal Arcanum will erect seven-story brick and stone building to cost about \$300,000.

Washington, D. C.—Stables.—The Larz Andersons have had plans prepared by Little & Brown of New York and awarded contract to Conner & Wentworth for erection of four-story brick and granite fireproof stable-lighted by electricity and to have all modern conveniences; cost \$25,000.

Washington, D. C.—Hotel Addition.—H. J. Hardenbergh, 10 West Twenty-third street, New York city, has prepared plans and Geo. A. Fuller Company, 137 Broadway, New

York, has contract for building proposed addition to New Willard Hotel, recently reported, to cost \$500,000.

RAILROAD CONSTRUCTION.

Railways.

Acme, Texas.—The Acme, Red River & Northern Railway has amended its charter to build north from Acme to the Red river, eight miles, and from Acme southeast to Quanah, six miles.

Anniston, Ala.—Wagon Bros. of Anniston have, it is reported, been awarded a contract of the Louisville & Nashville Railroad for building four long side-tracks at Alabama City.

Anniston, Ala.—R. O. Watson has a sub-contract on the East & West Railroad of the Seaboard Air Line from Piedmont west.

Austin, Texas.—The time for completing the Missouri, Kansas & Texas Railway extension to Austin has been extended to April 1, 1904.

Baltimore, Md.—Thomas M. Ward, engineer for the Maryland & Pennsylvania Railroad Co., writes the Manufacturers' Record confirming the report that the company is making surveys for a proposed line, the construction of which has not yet been decided upon, from Bynum Station via Allibone, Dublin and Castleton to Conowingo, on the Susquehanna river, in Harford county, Maryland.

Baltimore, Md.—Reports from West Virginia state that the Baltimore & Ohio Railroad Co. is considering the practicability of building an extension from Belington, W. Va., through Virginia to the Chesapeake bay. J. M. Graham is chief engineer at Baltimore.

Chase City, Va.—The Blackstone & Southern Railroad has given notice of condemnation proceedings preparatory to building its line. The right of way is to be 100 feet wide; the grading will be light, and with but few bridges.

Chester, S. C.—The Carolina Northwestern Railway will, it is reported, extend its tracks beyond Lenoir at least twenty-five miles, and possibly to Bristol, Tenn. L. T. Nichols is general manager at Chester. He writes the Manufacturers' Record that the company is working on an extension of thirty-five miles from Lenoir, Caldwell county, North Carolina, up Wilson creek to the top of the mountains, beyond which point plans are not yet announced; J. R. Ervin, chief engineer South Atlantic Construction Co., Lenoir, N. C.

Columbus, Ga.—It is reported that the Brunswick & Birmingham Railroad is considering the possibility of building its extension through Columbus.

Cumberland, Md.—The Westernport & Keyser Traction Co. will, it is reported, build its proposed line to Keyser over private rights of way.

Demopolis, Ala.—To build the proposed railroad from Demopolis to Linden, about twenty miles, the following committees have been appointed: George W. Taylor, W. H. Welch, E. E. McCarty, W. S. Prout and L. Moyer, to solicit subscriptions; Judge J. C. Anderson, M. Mayer, G. W. Taylor and L. C. Cairns, charter and finance committee; J. B. Meriwether, G. T. Bretling and E. J. Gilder, committee on right of way.

Fort Worth, Texas.—The International & Great Northern Railroad has opened its line to Fort Worth.

Frederick, Md.—A second survey is being made for the proposed Frederick, Legore & Gettysburg Electric Railroad.

Galveston, Texas.—Capt. Joe Owens of Galveston, it is reported, has the contract for building the proposed railroad from Bay City, Texas, to Palmdale, Texas, twenty-eight miles. He is reported as saying that grading will be finished by May 15.

Glasgow, Ky.—A survey has begun for the electric railway from Glasgow to Burkesville via Summershade, Edmonston and Morrowhine. Branches will, it is reported, be built from Summershade to Tompkinsville, ten miles, and from Glasgow to Horsecave.

Hagerstown, Md.—The Hagerstown Electric Railway Co. will, it is reported, extend its trolley line from Boonshore across South mountain to Myersville.

Hattiesburg, Miss.—W. A. Stevenson, general manager of the Pearl & Leaf River Railroad Co., writes the Manufacturers' Record that the company, which is now operating its line between Hattiesburg and Prentiss, Miss., will immediately extend nine and one-quarter miles west from Prentiss to Silver Creek, and connect with the Columbia and Mendenhall branch of the Gulf & Ship Island Railroad, now under construction.

Hazlehurst, Miss.—Committees have been appointed to solicit subscriptions for the pro-

posed electric railroad to run west from Hazlehurst, making a loop of nearly fifty miles.

Hobart, Okla.—George Sturgeon, third vice-president of the Colorado, Oklahoma & Texas Railway Co., writes the Manufacturers' Record that the line "will be built from Denison, Texas, to Pueblo, Col., running through the southwestern portion of the Chickasaw Nation through the counties of Comanche, Kiowa, Washita and Roger Mills, in Oklahoma, and Hemphill and Ochiltree counties, in the Panhandle of Texas, also Beaver county, in Oklahoma, thence to Pueblo through the southeastern portion of Colorado. The length of the road will approximately be 468 miles. This route will be almost an air line from Denison to Pueblo, and will shorten the distance between the Gulf ports and Colorado centers about 150 miles. The country through which the road will pass is a cotton and cereal-producing country. Our chief engineer is E. E. Colby, late of Springfield, Mo."

Ivydale, W. Va.—The Kanawha & Northern Railway Co. of Ivydale, Clay county, West Virginia, has been incorporated to build a line from the east side of the Elk river, at the mouth of Otter creek, to Parkersburg, about sixty miles. The incorporators are V. L. Black, Angus W. McDonald of Charleston, W. Va.; J. W. Angus, Elizabeth, N. J.; D. S. Benson and F. M. Gramm of Ivydale, W. Va.

Knoxville, Tenn.—W. H. Oliver & Co. of Knoxville are reported to have the contract for building second track on the Southern Railway from Orange, Va., to Alexandria, seventy-eight miles.

Lexington, Ky.—A lumber company has closed a deal, it is reported, for 10,000 acres of timber land in the Pearl river district of Mississippi, and will build a railroad forty miles long.

Lexington, Ky.—Reported that tracklaying has begun on the proposed Lexington & Paris Electric Railway.

Louisville, Ky.—The Louisville & Nashville Railroad will, it is reported, remove its freight terminals from Birmingham, Ala., to Boyles Station, in the suburbs. R. Montfort is chief engineer at Louisville.

Louisville, Ky.—The Louisville & Nashville Railroad has secured rights of way near Adams Station, Tenn., for changing its line. There will be a 30 or 40-foot rock cut and a 70-foot fill. R. Montfort is chief engineer at Louisville.

Mayking, Ky.—It is reported that the Kentucky & Virginia Railroad will build an extension from Wise, Va., to Pound Gap, ten miles.

Memphis, Tenn.—Charles H. Bodkin of Memphis is reported to have the contract for grading the new freight and switch yard of the Illinois Central Railroad immediately south of Memphis. The work includes the removal of 1,000,000 cubic yards of earth, and more than five miles of track will be laid by the company.

Memphis, Tenn.—The Southern Construction Co. of Memphis, W. A. Bickford, president, has, it is reported, received a sub-contract for two miles of the Union Belt Railway line.

Memphis, Tenn.—The new yards of the Illinois Central Railroad, immediately south of Memphis, will, it is announced, contain more than eighteen miles of track.

Meridian, Miss.—The Board of Trade has raised \$50,000 for the proposed Memphis & Gulf Railroad and the establishment of its shops at Meridian. Construction will, it is reported, begin this month. Chester H. Pond is president of the Cornell Construction Co. of Newark, N. J., which will build the line.

Mexico, Mex.—Engineers for the Mexican Central Railway have, it is reported, completed a survey between El Pan, Mex., and San Antonio, Texas. Another party is working between Laredo and San Antonio. These surveys are for the proposed extension from Monterey to San Antonio. Lewis Kingman is chief engineer.

Mobile, Ala.—The Manufacturers' Record is officially informed that the Mobile, Jackson & Kansas City Railroad is not yet doing anything towards extending the Gulf & Chicago Railway northward from Middleton, Tenn., to Jackson, Tenn.

Morgantown, W. Va.—The incorporators of the Fairmont, Morgantown & Cheat River Railway, to build an electric railroad seventy-five miles long, are Joseph H. McDermott, president; David Elkins, Jr., Frank K. Bretz, Clarence B. Dille and Thomas R. Dille, all of West Virginia.

Nashville, Tenn.—The Tennessee Central Railroad proposes to enlarge its front street and east yards. R. E. Harwood is chief engineer of the Tennessee Construction Co.

Nashville, Tenn.—The Tennessee Central Railroad has acquired ten acres of land at Hopkinsville, Ky., for terminal yards. R. E. Harwood is chief engineer of the Tennessee Construction Co., which is building the road.

New Berne, N. C.—The Blades Lumber Co. is reported building a standard-gauge railroad across Pamlico county, starting at Sparrow Landing, near the mouth of Goose creek, and running via Grantsboro, probably to Aurora. Four miles of grading are done.

New Orleans, La.—Gen. F. F. Myles of New Orleans has completed arrangements for building the proposed electric railroad from New Iberia to Morgan City.

Oklahoma City, Okla.—D. K. Kelly of Kansas City is reported looking for terminals for the proposed St. Louis, Oklahoma & Southwestern Railroad, to run from St. Louis to Quanah, Texas.

Palestine, Texas.—It is reported that the International & Great Northern Railroad will soon build the proposed branch from Italy, on the Fort Worth division, to Dallas. J. D. Trammel is chief engineer at Palestine.

Philadelphia, Pa.—The Pennsylvania Railroad Co. is advertising for bids for the construction of the proposed new terminal tracks and connections in and around Washington, D. C. Chief Engineer W. H. Brown refers bidders to J. T. Stuart, assistant engineer at Chester, Pa., for information.

Portsmouth, Va.—It is reported that the Seaboard Air Line will build an extension from Duke Station, on the East & West Railroad of Alabama, to Gadsden, Ala., fourteen miles, and will connect with the Chattanooga Southern. Also reported that survey is from Coal Creek to Gadsden. J. M. Barr, vice-president Seaboard Air Line, writes the Manufacturers' Record from Portsmouth, Va., that no conclusion has yet been reached by the company with respect to building this branch.

Salem, Ark.—W. K. Palmer of Kansas City is reported making a survey from Afton, on Spring river, to Fayetteville, Ark., for the proposed Salem & Eastern Railroad, which was incorporated last year to build an electric line from Salem to some point on Spring river. The line will now, it is stated, run from Poplar Bluff, Mo., via Doniphan, Mo., and Salem, Mountain Home, Yellville, Harrison and Huntsville, Ark., to Fayetteville.

Savannah, Ga.—President J. P. Williams of the Georgia, Florida & Alabama Railroad is reported as saying that the road will positively be built from Cuthbert, Ga., to Columbus, Ga., about fifty miles.

Shawnee, Okla.—Tracklaying has been completed to Shawnee, on the Atchison, Topeka & Santa Fe extension to Paul's Valley, to which point 108 miles of track are yet to be laid.

Sistersville, W. Va.—Work has begun on the Sistersville & New Martinsville Electric Railway.

Sistersville, W. Va.—The Tyler & Wetzel Railway has been granted a franchise in Sistersville.

Sparta, Ga.—Mr. S. Reese, one of the incorporators of the East & West Railroad, recently chartered, writes the Manufacturers' Record that the line runs from Sparta to Sandersville. Nearly the entire distance has been graded under a former charter. It is hoped to resume work soon.

Stephenville, Texas.—A movement is under way to build a railroad from some point on the Texas & Pacific Railway via Stephenville to Hamilton.

St. Louis, Mo.—It is reported to be the 'Frisco system's purpose to extend the Arkansas & Choctaw line beyond Ardmore, I. T., to Wichita Falls, Texas, and thence west to Capitan. J. F. Hinckley is chief engineer of construction, 800 Fullerton Building, St. Louis, Mo. He informs the Manufacturers' Record that he has no knowledge of any such plan.

St. Louis, Mo.—The St. Louis & San Francisco Railroad will, according to a report, purchase control of the San Antonio & Aransas Pass Railway in Texas, 687 miles long, and will connect with it by a line from Brady to Kerrville. J. F. Hinckley is chief engineer, 800 Fullerton Building, St. Louis.

Sylvania, Ga.—Mills B. Lane, who lately purchased the Sylvania Railroad, has, it is reported, filed notice of reincorporation as the Sylvania Central. The line is fifteen miles long.

Tallapoosa, Ga.—The Vanderbilt Lumber, Mining & Southeastern Railroad Co. is reported to have a large force of men pushing construction on its line, now five and one-half miles long. It is planned to run southwest through Wedowee, the county-seat of Randolph county, Alabama, and thence via Alexander City and Wetumpka to Montgomery,

135 miles. Geo. O. Vanderbilt of Princeton, N. J., is president.

Vernon, Texas.—A construction company is reported organized to build the proposed Vernon, Roswell & El Paso Railroad.

Versailles, Ky.—The Bluegrass Consolidated Traction Co. has been granted an extension of time to September 1 for beginning work on the Lexington & Frankfort Electric Railway in Versailles.

Vinegar Bend, Ala.—Reported that the Alabama & Mississippi Railway of the Vinegar Bend Lumber Co. has completed its entrance into Leakesville, Miss. The line is to be further extended to Ellisville, Miss., about fifty miles. H. S. Turner is general manager at Vinegar Bend.

Washington, D. C.—Reported that the Southern Railway will soon let contract for building sixty-five miles of line from Maryville, Tenn., to Rushmill, S. C. W. H. Wells is engineer of construction at Washington.

Washington, D. C.—The Great Falls & Old Dominion Electric Railway Co. has passed under the control of John R. McLean and associates, who will build the proposed line from the Virginia end of the Aqueduct bridge to the Great Falls of the Potomac. The new directors are John R. McLean, R. D. Weaver, R. H. Goldsborough, Geo. G. Boteler, Nathan B. Scott, Colin H. Livingston and Wm. F. Hart.

Wheeling, W. Va.—An electric railway will, it is reported, be built from Bethany to Wellsburg, with a spur to Independence, Pa., and Bellview campground. Those interested are Charles E. Hossford of Butler, Pa.; Plattoff Zane, John H. Garrison and George I. Garrison of Wheeling, W. Va.

Winchester, Ky.—The Bluegrass Traction Co. has filed a mortgage to secure \$350,000 of 5 per cent. bonds to build its line.

Street Railways.

Baltimore, Md.—The United Railways & Electric Co. has opened its extension from Dundalk to Sparrow's Point, about three and one-half miles.

Beaumont, Texas.—Construction has begun on the Sour Lake Electric Railroad, in which Ed. Kennedy and J. W. Meeker are interested.

Beaumont, Texas.—Material has been received for the extension of the Beaumont Electric Railway system on Mongolia avenue. Nearly two miles of track are to be laid.

Corsicana, Texas.—W. H. Thomson, engineer, is reported as saying that the Corsicana Transit Co. will resume work and build a track on Eleventh street, instead of on Benton street.

Fairmont, W. Va.—The Fairmont & Clarksburg Street Railway Co. proposes to build a line from Fairmont to Fairview.

Fernandina, Fla.—The electric railway to the beach has been opened.

Fort Worth, Texas.—F. M. Haines, general manager of the Northern Texas Traction Co., writes to the Manufacturers' Record that the work to be done at once will consist of short extensions to existing city lines.

Johnson City, Tenn.—The Johnson City Traction Co. has organized, surveyed its route from Johnson City to the mountain branch of the National Soldiers' Home, and is beginning construction of its line, which is to be completed within sixty to ninety days. The company desires quotations on 70-pound steel rails, new and relays. H. H. Kirkpatrick is general manager.

Kansas City, Mo.—The Metropolitan Street Railway Co., Bernard Corrigan, president, will, it is announced, build the proposed extension to connect with the racetrack of the Kansas City Jockey Club and Fair Association. It will run on Flora and Lydia avenues from Forty-seventh to Sixty-first street.

Louisville, Ky.—The Kentucky Traction Co. will, it is stated, continue its proposed line to Riverview as far as Owensboro. W. L. Weller, Jr., and others are interested.

Meridian, Miss.—The Meridian Street Railway Co. is to build two and one-half miles of new track.

Montgomery, Ala.—The Montgomery Street Railway Co. has applied for a franchise to extend its line out the Red Bridge road to and across Glimmer street.

Scranton, Miss.—The Pascagoula Street Railway & Power Co. has elected directors as follows preparatory to building its line, for which machinery and material are being received: L. S. Anderson of Moss Point, Miss.; Atilla Cox, Charles T. Ballard, Harry Weisinger, S. S. Bush, J. D. Stewart, Oscar Fenley, J. W. Gault, Samuel A. Culbertson, John L. Helm and J. Ross Todd of Louisville, Ky.; Volney Brown of Pascagoula, Miss., and H. S. Rourke of Scranton, Miss.

Wheeling, W. Va.—The Wheeling Traction

Co. will, it is reported, make extensive improvements on the Moundsville branch.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Agricultural Implements.—J. M. Neil Co., Box 475, Charleston, W. Va., will purchase farming implements, nursery stock, etc., and wants prices on same.

Boiler and Engine.—See "Oil Mill."

Boiler and Engine.—See "Mill Supplies."

Boiler and Engine.—Baker, Stillwell & Hart, Birmingham, Ala., want prices on second-hand 25-horse-power side-crank engine and 35-horse-power return tubular boiler.

Boiler, etc.—Board of Awards, care city register, Geo. N. Nimsen, Baltimore, Md., will open bids May 13 for erection of boiler, air pump and injector at Baltimore Polytechnic Institute. Each bid must be accompanied by certified check for \$500. Specifications can be had and plans seen at office of Edw. D. Preston, Inspector of buildings. Usual rights reserved.

Boilers.—Florida Tobacco & Commercial Co., Havana, Fla., wants boilers.

Boilers.—M. T. Lewman & Co., Demopolis, Ala., wants prices on second-hand locomotive-type boilers from 50 to 125 horse-power, delivered f. o. b. Demopolis.

Boilers and Engines.—See "Well-drilling."

Bridge.—E. B. Pleasants, chief engineer, care M. Riddle, superintendent Atlantic Coast Line Railroad Co., Richmond, Va., will open bids May 20 for building concrete-steel arch bridge over railroad tracks at Bridge street, in Jacksonville, Fla. Bridge will contain eleven arches and have length of 845 feet and width of 58 feet. Plans can be examined, also specifications and blank forms of proposal and contract obtained at offices of E. B. Pleasants, Wilmington, N. C.; Philip Aylett, Portsmouth, Va.; W. M. Davison, Jacksonville, Fla., and the Concrete-Steel Engineering Co., consulting engineer, Park Row Building, New York city. Certified check for \$1000 must accompany each bid; \$20,000 bond required and usual rights reserved.

Brush Manufacturers.—Barataria Canning Co., Biloxi, Miss., wants addresses of manufacturers of revolving brushes.

Building Material.—Arthur Hardware Co., St. Matthews, S. C., wants iron and glass front, one elevator, tin roofing, inside fixtures for hardware, etc.

Building Material.—Bank of Carteret, R. W. Taylor, president, Morehead City, N. C., will need iron columns for front of building.

Building Materials.—See "Mill Supplies."

Building Materials.—F. Mertens' Sons, Cumberland, Md., will need some Ohio sawed stone, rods, bolts, steel beams, etc.

Building Materials.—W. A. Hargis, Granville, Tenn., will need building material and boxes for telephone line.

Canning Machinery.—Boynton Packing Co., Boynton, Fla., wants canning outfit, gas and steam engines, gaslighting plant, ice plant, windmills and pump fittings.

Cement-factory Equipment.—Kansas Portland Cement Co., Geo. E. Nicholson, president, Iola, Kan., will purchase complete machine-shop equipment, 1500-horse-power engine plant, elevating and conveying machinery and overhead cableway or tramway, approximately 2000 feet between centers, belting, electric-light plant, etc.

Church Furniture.—Rev. Theo. Smoot, Mt. Savage, Md., wants prices on pews for church.

Clock.—Kosciusko Oil Mill & Fertilizer Co., Kosciusko, Miss., is in market for watchman's clock.

Coke Ovens.—Bids are requested by Loup Creek Colliery Co. for construction of 500 beehive ovens staked out on lower Loup creek, Fayette county, West Virginia. For information apply to F. P. Mills, Robson, W. Va.

Cotton Gln.—See "Oil Mill."

Cotton Mill.—See "Textile Machinery."

Cotton-mill Supplies.—See "Mill Supplies."

Dynamo.—See "Woodworking Machinery."

Electrical Equipment.—See "Water-works Improvement."

Electrical Supplies.—Guarantee Electrical Co., 204 Franklin avenue, St. Louis, Mo., wants motors, dynamos and general electrical supplies.

Electric light Plant.—See "Cement-factory Equipment."

Electric-light Plant.—Huntsville Railway, Light & Power Co., Huntsville, Ala., will possibly need later on 150-kilowatt direct-connected three-phase alternating system with about 100 enclosed arc lamps.

Elevator.—See "Building Material."

Elevator.—Scott Sparger Company, Greensboro, N. C., will want elevator (freight).

Engine.—See "Cement-factory Equipment."

Engine.—See "Shoe Machinery."

Engines.—See "Canning Machinery."

Engines.—W. B. W. Howe, Spartanburg, S. C., wants catalogues of hot-air engines and pumps, also gasoline engines and pumps.

Envelope Machinery.—Henry B. Myers, New Orleans, La., wants prices and full information regarding machinery for making envelopes.

Fertilizer Machinery.—Pollock Fertilizer Co., 51 S. Gay street, Baltimore, Md., will want equipment for modern fertilizer factory.

Foundry Equipment.—See "Steam Hammer."

Gas Plant.—See "Canning Machinery."

Grading.—W. E. Thomas, clerk of council, Roanoke, Va., will open bids June 3 for grading Elm avenue in accordance with plans and specifications on file with J. H. Wingate, city engineer. Certified check for \$25 must accompany each bid.

Heating Apparatus.—Boys' Industrial School, East Lake, Ala., will need heating apparatus.

Icemaking Machinery.—Geo. E. Bunce, Box 32, Richmond, Va., wants addresses of manufacturers of machinery for freezing ice for skating rinks.

Ice Plant.—See "Canning Machinery."

Knitting Mill.—See "Textile Machinery."

Machine Tools.—See "Cement-factory Equipment."

Mattress Machinery.—Greenville Mattress Co., J. W. Sinclair, secretary, Greenville, Texas, wants mattress-filling machine, cotton and hair picker.

Mill Supplies.—See "Shoe Machinery."

Mill Supplies.—See "Cement-factory Equipment."

Mill Supplies.—United States Lumber & Supply Co., Berwick, Pa., will need saw-mill supplies.

Mill Supplies.—D. C. Brown, Anderson, S. C., wants engine, boiler, mill supplies and building materials.

Mining.—Dunn Machinery Co., Atlanta, Ga., wants addresses of parties making machine for screening gravel, separating the small one-quarter-inch stuff from the clay and larger stones.

Mining Equipment.—See "Cement-factory Equipment."

Navy-yard Supplies.—Bureau of Supplies and Accounts, Navy Department, Washington, D. C., will open bids May 19 for supplies for all the Eastern navy-yards. A schedule has been issued in order to give bidders the opportunity of competing for deliveries at all yards. Address the bureau for blank schedule or any of the purchasing pay offices in the principal seaport cities.

Oil Mill.—L. J. Swahn, Enterprise, Miss., wants full information regarding erection of cottonseed-oil mill, including approximate cost of machinery for mill with capacity of 2000 bales of cotton, cost of manufacturing, price of manufactured goods, etc.

Oil Mill.—H. W. Broom, Waxhaw, N. C., wants prices on machinery for 20-ton cottonseed-oil mill and ginners, including boiler and engine.

Oil Mill.—Williamsburg Cotton Oil Co., Sumter, S. C., and St. Paul Cotton Oil Co., Sumter, S. C., will buy equipment for their oil mills on May 12 at office of P. Moses, Jr., in Sumter, S. C. Bids and proposals from manufacturers requested.

Paving.—Sealed proposals will be received until May 19 by committee on street improvements, Charlottesville, Va., for laying 30,000 square yards bituminous macadam, vitrified brick or granite block pavement. Full details, blank forms of proposal, specifications, etc., can be obtained upon application to engineers, De Mott & Winfree, City Hall, Charlottesville.

Paving Blocks.—Board of Awards, care of city register, Baltimore, Md., will open bids May 13 for granite paving blocks. Specifications and proposal sheets will be furnished on application to above office. Certified check for \$200 must accompany each bid. Usual rights reserved.

Pumps.—See "Engines."

Railroad Work.—J. D. Beardsley, general manager Louisiana & Northwestern Railroad, Gibsland, La., wants bids on about 2,000,000 yards of earthwork (railroad work).

Railway Equipment.—Savannah Locomotive Works, John J. McDonough, Jr., secretary, Savannah, Ga., is in market for 13 to 17-ton Shay or Climax engine, second-hand, for delivery in South Georgia.

Road Improvement.—H. J. Brewer, Elberton, Ga., wants estimates on road improvement, such as macadamizing, etc.

Roof.—C. B. Cooke, city engineer, Wheeling, W. Va., will let contract May 12 for new slate roof for the electric-light plant. Plans can be seen at Mr. Cooke's office or at city electric-light plant.

Roofing.—C. C. Felton, Merrouge, La., wants addresses of manufacturers of rubber-oid roofing.

Safes.—Bank of Carteret, R. W. Taylor, president, Morehead City, N. C., wants iron safes, etc.

School Furniture.—Boys' Industrial School, East Lake, Ala., will need school and dormitory furnishings.

Screens.—See "Mining."

Sewer System.—H. J. Slocum, captain cavalry quartermaster, postoffice building, Chattanooga, Tenn., will open bids May 23 for constructing water and sewer system and sewage purification plant at new military post in Chickamauga, Park, near Chattanooga, Tenn. Plans, specifications and instructions to bidders may be seen at above office or at room 39, War Department, Washington, D. C. Usual rights reserved.

Shoe Machinery.—D. B. Edinger, Fredericksburg, Va., wants shoe-manufacturing machinery, gas engine, shafting, pulleys, hangers, belting, etc.

Shovel-factory Machinery.—J. E. Murphy, Del Rio, Texas, wants complete equipment for shovel factory.

Steam Hammer.—D. F. Hill & Co., Manufacturers' Record Building, Baltimore, Md., are in market for small steam hammer, second-hand, in good order.

Steelworkers.—I. W. Campbell, Suite 307, Norton Building, Louisville, Ky., desires correspondence with parties relative to having manufactured a small patent made of fine spring steel.

Store Fixtures.—See "Building Material."

Steel Building.—Mordcaul T. Endicott, chief bureau of yards and docks, Navy Department, Washington, D. C., will open bids May 23 for constructing one-story steel storage building at navy yard, Norfolk, Va.; appropriation \$27,500. Plans and specifications can be seen at bureau, or will be furnished by commandant of navy yard.

Sugar-cane Machinery.—Florida Tobacco & Commercial Co., Havana, Fla., wants sugar-cane machinery.

Tank.—Asheville Ice & Coal Co., Asheville, N. C., wants second-hand iron tank about six feet high, three feet diameter, with heads. Give full description.

Telephone Equipment.—See "Building Material."

Textile Machinery.—H. G. Dickinson, Laredo, Texas, wants addresses of manufacturers of most suitable machinery for cotton, woolen and knitting mills for Texas and Mexico.

Tobacco Machinery.—Bowling Green Tobacco Co., Bowling Green, Ky., wants granulator and smoking-tobacco packer.

Veneering Machine.—Florida Tobacco & Commercial Co., Havana, Fla., wants veneering machine.

Water-works Improvement.—El Reno Water Co., El Reno, O. T., contemplates extending and improving its plant by installing electrically-driven pumps, its present project to install suitable pumping units for 30-horse-power electric motors, and desires correspondence.

Well-drilling.—Red River Oil Co., Compton, Ky., will need standard drilling machinery complete with boilers and engines.

Windmills.—See "Canning Machinery."

Woodworking Machinery.—Church Lumber Co., H. A. Pfohl, president, Winston-Salem, N. C., is in market for shingle saw.

Woodworking Machinery.—Henderson Lumber Co., Anthony, W. Va., may later on be in market for nail-peg, stave and nail-peg heading machinery.

Woodworking Machinery.—Strehlow & Phelps, contractors, World's Fair grounds, St. Louis, Mo., will need dynamo, band, cut-off and rib saws.

Woodworking Machinery.—W. H. Magness, Sparta, Tenn., wants prices on machinery for making furniture.

Woolen Mill.—See "Textile Machinery."

TRADE NOTES.

Allis-Chalmers Offices.—Allis-Chalmers Company, Chicago, is reminding its patrons, branch offices and others interested that the general offices are now located in the New York Life Building, fourteenth floor, corner La Salle and Monroe streets.

Mengel's Machinery Exchange.—This well-known Baltimore establishment announces for the benefit of correspondents and customers that its offices and warehouse have been removed to 12 E. Lombard street. Boilers, engines, machine tools, woodworking machines and various kinds of equipment are included in the Exchange's offerings. Send for list.

A Plunger Elevator.—The Plunger Elevator Co. of Worcester, Mass., has sold, through its New York office, 156 Fifth avenue, an elevator with a lifting capacity of 14,000 pounds to the MacAndrews & Forbes Licorice Co., Camden, N. J. The elevator will carry loaded cars from one floor to another, the total travel being twenty-four feet. No counterweights or cables will be used in this installation.

Interest in Lumber Plant.—The manufacture of lumber and the working of wood into marketable articles constitute an important part of Southern enterprise. One plant, conducting a profitable business, offers an interest for sale. The mill has band-saw equipment, also works hardwood, mostly poplar. An investment of \$30,000 is desired. For information address Sawmill, care Manufacturers' Record.

Florida Timbered Lands.—There are many extensive tracts of timbered lands in the South awaiting development. In Florida valuable yellow-pine and cypress timber exists in extensive territories. In West Florida, near the Apalachicola river, some tracts that are in the direct line of an early advancement in value are offered for sale. Messrs. Newman & Hill, Columbus, Ga., can give information to investors.

Paper-Manufacturing Opportunity.—At this time an opportunity for an experienced paper manufacturer to become interested in a plant is being offered. The party seeking an associate wants to communicate with someone willing to invest from \$10,000 to \$30,000 having a full knowledge for making all grades and kinds of paper from wood. Particulars can be obtained by addressing C. R. F., P. O. Box 950, St. Louis, Mo.

West Virginia Coal Lands.—The New River coal fields of West Virginia present one of the most active scenes in the coal-producing regions of the South. A tract of 3500 acres in that section is now offered for sale. This property is on the Chesapeake & Ohio Railroad, and has going coal operations on it. The owners prefer dealing direct with purchasers. For information address P. O. Box 808, Charleston, W. Va.

Flour Mill for Sale.—The Southern milling industry is one of the many prosperous avenues of activity. At Newberry, S. C., there is a 75-barrel roller-process flour mill that is offered for sale by Dr. D. L. Boozer, Jr., administrator, P. O. Box 97. This plant is fully equipped with modern machinery, including an electric-lighting plant, and there is a seven-acre tract of land attached. The property offers an opportunity for investors.

Pneumatic Tools.—The Rand Drill Co. of New York, through its pneumatic-tool department, reports the recent sales of many large complete air plants, including the new Imperial Pneumatic Hammers and Piston Air Drills. It also states that the business in pneumatic tools has surpassed most sanguine expectations. Plans are now being drawn for an extensive enlargement of the Rand works to meet these increased demands.

Smith Premier Typewriter.—An announcement that should be noted by interested parties is that the Smith Premier Typewriter Co., Syracuse, N. Y., has established an executive office at 257 Broadway, New York, where all communications of a general business nature are to be sent in future. Remittances and all correspondence for the financial department and all orders for machines, cabinets and supplies should be sent to Syracuse, as heretofore.

Brown Corliss Engines.—Corliss engines are always in demand. At this time, when all America is one vast hive of busy industries striving to meet the requirements of progress, the Brown Corliss engines are in great favor with power-users of discernment. The Brown Corliss Engine Co. of Corliss, Wis., builds them. Pfister & Vogel Leather Co. of Milwaukee have ordered one 28x48-inch for heavy duty, and F. R. Payne of Williams, Iowa, has ordered a 12x30-inch.

Ivy Belt Dressing.—Users of belting find that satisfactory belt dressings are valuable adjuncts of their operating equipment. "That slipping" of the belt is particularly annoying. It can be stopped by using Ivy Belt Dressing. This product comes in solid blocks of one pound each. It is ready for instant use; it is clean. Messrs. Scott & Co., 230 Illinois street, Chicago, manufacture it. National Oil Works & Mill Supply Co. of New Orleans is agent in its territory.

Lumber Plant Offered.—Lumber manufacture is one of the leading avenues of business activity in Arkansas, this State having extensive tracts of timber land and the necessary advantages as to transportation, etc. A saw-mill, power plant, two dry-kilns, railroad and full equipment of a plant is offered for sale by the Southern Cooperation Co. of St. Louis, Mo. This property is in Northeast Arkansas, and is an especially good one to develop as a slack-barrel plant.

Steam-Turbine Installation.—The Sherwin-Williams Company, paint manufacturer, operating several factories in United States and Canada, has purchased a Westinghouse steam turbine power outfit for its Cleveland (Ohio) plant. The power unit to be installed consists of a Westinghouse steam turbine direct connected to a 400-kilowatt twophase turbo-generator. The current will be generated at 440 volts, and sixty cycles will be used for general power and lighting purposes throughout the factory.

Smelting Equipment.—Westinghouse, Church, Kerr & Co. of New York recently received an order for the entire mechanical equipment of a new smelter near Butte, Mont. The equipment comprises two 160-horse-power Westinghouse compound engines driving Connorsville blowers; one 55-horse-power Westinghouse compound engine driving a 45-kilowatt D. C. 125-volt generator, with switchboard; two Westinghouse Standard engines; four Roney mechanical stokers for four 250-horse-power B. & W. boilers.

Corn and Flour Mill.—Mills producing foodstuffs are usually profitable enterprises. In milling corn and wheat, the leading cereals, there is exceptional activity at this time. A 200-barrel flour and 50-barrel corn mill is being offered for sale by N. G. Turney of Dallas, Texas. The property is located in the Texas wheat belt, and its products are readily sold in that State and in Mexico. The plant is equipped with the Barnard & Leas system, and is modern in every particular. Information can be obtained from Mr. Turney.

H. E. Maxfield & Co.—Users of pumping machinery, also of hoisting engines and general machinery, will be interested to know that Mr. H. E. Maxfield, formerly resident agent for Lawrence Centrifugal Pumps, is now conducting business under the title of H. E. Maxfield & Co., with offices at 136 Liberty street, New York. All inquiries for centrifugal pumping machinery, house pumps and other equipments will be given prompt attention. Buyers in this field are advised to obtain Maxfield quotations when they are in the market.

Rossiter, MacGovern & Co.—This incorporated firm is well known in the machinery world. Its electrical and steam machinery, in all kinds of which it deals, is sold all over this country. Messrs. Rossiter, MacGovern & Co., Robert J. Randolph, Jr., manager at Boston, Mass., make an announcement concerning the Boston office. Temporary quarters are now occupied at 110 State street, where they will remain until about September 1, when the firm's new and commodious offices in the India Building, 88 State street, will be ready for occupancy.

Columbus Steel Rolling Shutters.—The trade will be interested to know that F. P. Smith Wire and Iron Works, 100 Lake street, Chicago, has been appointed sole agent in its city and several States nearby for the Columbus (Ohio) Steel Rolling Shutter Co. This latter manufactures rolling steel doors and shutters for freighthouses, car barns, warehouses, etc. The unique improvements in the Columbus Company's product have been previously referred to in these columns, and they are causing a growing demand. Agencies are being established in all the large

centers as rapidly as representative firms in architectural or engineering work can be found.

Creswell & Waters Co.—This organization announces that it will continue to build the woodworking machines hitherto manufactured by Goodell & Waters, plant at Blaine and Ruffner streets, Philadelphia, Pa. This well-known woodworking machinery has attained great prominence among users throughout the woodworking world, and will be kept up to its standard and improved as experience and demand indicates. The Creswell & Waters Co. is adding new machinery to the plant, and will introduce a new line of planers and band resaws in the near future.

Radial Brick Chimneys.—Chimney construction by modern methods gives the owners of such structures many advantages that older types do not possess. In design, material and construction the Alphons Custodis Radial Brick Chimney fulfills the most exacting requirements. This is the chimney selected by the American Tobacco Co. for erection at Wilson, N. C. Contract for building it has been awarded to the Tattall Engineering Co., offices in Arcade Building, Philadelphia. This chimney will be four feet in diameter by ninety feet high. Tattall Engineering Co. also has contract for three-foot four-inch by 90-foot chimney for Imperial Tobacco Co. at Rocky Mount, N. C., and seven-foot by 125-foot chimney at Kennett, Pa.

Albert Frank & Co.—This well-known general advertising agency has removed to Broad Exchange Building, 25 Broad street, New York city. Increasing business demanded more and better facilities in order to keep pace with the trades' requirements. Messrs. Frank & Co. are not limited to America, but place advertisements in Great Britain and on the Continent of Europe. They have perfected arrangements also to contract with leading newspapers and magazines in South Africa and Australia, more particularly for handling the advertising of manufacturers and exporters desirous of reaching those important sections of the world. Albert Frank & Co. is a corporation, of which James Raseovar is president and Collin Armstrong, treasurer.

Highest Examples of Engineering Appliances.—In establishing the new National Bureau of Standards the government intends to test and display the highest examples of engineering appliances produced in the United States. Because of this purpose it is evident that the selection of any appliance reflects the greatest degree of credit on the manufacturer of that appliance. It is therefore a matter of congratulation for the Harrisburg (Pa.) Foundry and Machine Works that the bureau mentioned has ordered one of its latest standard compound engines. The Harrisburg Engine will be used for driving electric generators to be made by the General Electric Co., and its capacity will be about 150 horse-power. There were a number of well-known builders of engines in competition with the Harrisburg company in this award.

Zelnicker Supply Co.—The business of the Walter A. Zelnicker Supply Co., St. Louis, has grown to large proportions. It is establishing a branch at Seattle, Wash., where a full stock of railway, mill and factory supplies will be carried; W. M. West, formerly sales manager of A. Leschen & Sons Wire Rope Co., in charge. Offices have also been established at 503 Binz Building, Houston, Texas, in charge of H. E. Miller, and at Room 5, Providence Building, Savannah, Ga., in charge of Mel A. Collins. A. H. Crausby, formerly with Berlin Machine Works, is now representing the Walter A. Zelnicker Supply Co. in Arkansas; Geo. G. Huneken is now representing in North and South Carolina; C. M. Butin in Indiana and Ohio; Adam Young in Illinois. Herbert L. Schanberg will have charge of the railroad and large factory trade in the East.

New Things in Fans.—The Electric Supply Co., 38 and 40 Drayton street, Savannah, Ga., exhibits the latest thing in "Keep Cool" Electric Fans. It is a suspended revolving fan weighing two pounds, which revolves and cools the whole room, even the remotest corner, drives off the everlastingly fly and enables the entire family to be as comfortable as in December. This little fan can be suspended from any electric-lamp socket either on a chandelier, bracket or droplight, and will keep on turning out coolness and comfort. This company has ceiling, desk and bracket fans, revolving and oscillating desk fans, battery fans and Coleman deflectors. The stock is large and the variety ample. Mr. Walker, the proprietor, reports that the sale of fans this year has set in two weeks

earlier than any former season. Evidently the people have decided that spring is here, and that a fan is necessary to complete comfort during the warm months.

To Represent Eureka Fire Hose.—Phil C. Clark, who has been in the fire-hose business for eighteen years, has secured the exclusive agency of the Eureka Fire Hose Co. for the sale of its high-grade brands of "Eureka," "Paragon" and "Red Cross" fire hose in Texas, Louisiana, Oklahoma and Indian Territories. Mr. Clark is an ex-fireman and a veteran of the Civil War, having served through same with distinguished honors. He will headquarter part of the time in Texas, so as to be in touch with that and adjacent territory, and at New Orleans, so as to look after the trade in that section. Mr. Clark has been in the business so long that he has seen the passing of leather fire hose for rubber fire hose, and in this progressive twentieth century, the universal substitution of cotton rubber-lined fire hose instead of rubber fire hose by fire departments, railroads and corporations. The Eureka Fire Hose Co. in 1903 will use in the manufacture of its high-grade brands of fire hose over 1,000,000 pounds of long-staple cotton yarn grown in Texas and other Southern States, and manufactured into yarn in Georgia. Mr. Clark takes this opportunity of thanking his many friends for past favors, and trusts they will continue to patronize him, especially as he now has the exclusive sale in the territory specified above for the celebrated Eureka brands.

Manufacturing Sand-Lime Bricks.—This subject is attracting much attention. In pointing out the ways and means for manufacturing calcareous sandstones for building purposes, Herr Schwarz, the Zurich chemist, has contributed to modern progress. The Schwarz system is now being exploited in this country, where a number of plants are in successful operation. The most prominent technical and trade journals of Europe and America have from time to time commented on the benefits to be derived from the introduction of the system. The Pottery Journal, the representative of the association of calcareous sandstone factories, in referring to the Schwarz process, says: "The advantages of Schwarz's process are mainly seen in the practical construction of the mixing apparatus. By means of Schwarz's preparing apparatus the material to be molded is so excellently worked that it can be molded into shape almost as well as snow. Consequently it is easily pressed by simple machines, and all those troublesome, complicated presses hitherto found necessary for working up the material are superfluous, and thus a multitude of repairs and hindrances in work are avoided. I think I may justly draw the conclusion from my own observations that Schwarz's method may be regarded as perfectly safe and economical." The Schwarz System Brick Co., 8-10 Bridge street, New York, is prepared to supply information concerning the system to brick manufacturers and others interested in the subject of manufacturing sand-lime building brick.

TRADE LITERATURE.

Sparks From the Anvil.—An interesting publication, especially to steel-users and workers, is "Sparks From the Anvil." It is issued bi-monthly, and is devoted to the better knowledge of steel and its treatment. Included in the contents of the May number is "The Making of an Oil-Well Bit," "Hardening From a Gas Furnace," "Self-Hardening Milling Cutters," "Proposed Terms in Metallurgy," etc. Crucible Steel Co. of America, Pittsburg, Pa., issues the publication.

"We Whoop Our Tanks."—So says the Cypress Lumber Co. in referring to its cypress tanks. The mere fact that a tank holds water is secondary to the desirable specifications which the company enumerates as attributes of its product. They are made of Gulf cypress, have plenty of hoops, successful adjustable lugs, best workmanship, and are set up with care. Send for new leaflet, addressing the company at its works, Apalachicola, Fla., or its Boston office at 153 Milk street.

Dixon's Lumber Pencils.—These are manufactured in black and colors, and are first-class as to quality of material and richness of color. They are standard in every particular, packed one dozen in a box, six boxes in a carton. Lumber manufacturers, dealers, contractors and users generally have for years found Dixon's pencils of all kinds give the best of satisfaction. Manufactured by the Joseph Dixon Crucible Co. of Jersey City, N. J., the pencils mentioned are found briefly specified in a timely booklet now being mailed.

Seasonable Suggestions Ament Refrigeration. At the beginning of the summer months it is natural to look for increasing announcements from specialists in refrigerating and ice-making machinery. Seasonable suggestions on the subject are made by the Fred W. Wolf Company of Chicago in its folder now being distributed. During the busy season owners of plants are likely to require upon short notice ammonia, filtering material, insulating material, paint and oil, ammonia and brine pipe coverings, etc. Correspondence with the company named will enable buyers to secure equitable prices for prompt delivery.

Office and Store Fixtures.—The modern business man requiring store, office, bar and bank fixtures demands greater perfection in these products than his forefathers did. He is not content to makeshift, but buys the best possible equipment for convenience and to facilitate his business. Messrs. M. L. Himmel & Son, 403 E. Baltimore street, Baltimore, Md., are the leading makers of that class of fixtures. They have issued an illustrated and descriptive folder presenting some facts concerning their showcases and counters, desks, tables, stools, mirrors, chairs, etc. They offer especial designs, whose superior merits cause them to be in great demand.

Cogs That Fit.—A technical man is like a cog. He must fit in his place if he wishes success. Many technical men find themselves misplaced, yet are desirous of finding the cog which is their perfect mate, and find it difficult to come in contact with the proper conditions to better their condition. This state of the case brought into existence the Engineering Agency of Chicago, offices in Monadnock Block. This incorporated company is the large cog that connects the cogs termed "good men" and "good places." It has filled over 5000 positions during the past ten years. Technical men looking for positions better fitted to their abilities are invited to send for the company's interesting booklet, entitled "Cogs That Fit."

Coal-Handling Machinery.—Modern ways and means of handling coal include equipments of machinery that are remarkable in their ability to economically and satisfactorily perform their especial functions. Eminent inventors and manufacturers of mechanical equipment have entered into the coal-handling-machinery field and perfected and introduced installations now largely used. Probably there is no more prominent designer and builder of this class of equipment than C. W. Hunt Company, works at Staten Island, N. Y.; New York office at 45 Broadway. Its illustrated folder concerning coal-handling machinery, now being distributed, contains valuable information for those contemplating the purchase of equipment of this character.

Kentucky Electrical Machines.—Electrical equipments of various kinds enter largely into Southern industrial development, and the South does not lack for manufacturers of them. Dynamos and motors are prominent among electrical machines, and the Kentucky types have earned a reputation that is continually being added to by the successful results of their operation. The Kentucky Electrical Co. of Owensboro, Ky., builds the Kentucky Dynamos and Motors. Its apparatus is briefly described in timely leaflets now being distributed. The company offers these machines for slow and medium speeds, open multipolar type $\frac{3}{4}$ to $2\frac{1}{2}$ kilowatts, 4 to 25 horse-power, semi-enclosed multipolar type $\frac{3}{4}$ to $2\frac{1}{2}$ kilowatts, $\frac{1}{2}$ to 3 horse-power. Write for further details.

Doings of Expanded Metal.—A familiar product, and becoming more familiar every day, is expanded metal. This article is being used extensively now in all kinds of construction work. Its use in the Philadelphia water-works, at the United States naval coaling station at Frenchman's Bay, Maine; in sugar refinery at Oxnard, Cal., and in grandstand work at Buffalo are interesting subjects of the April number of "The Doings of Expanded Metal." This publication is issued by the Associated Expanded Metal Companies. It can be seen by addressing any of the offices—in New York, the New York Expanded Metal Co.; Northwestern Expanded Metal Co. in Chicago, Eastern Expanded Metal Co. in Boston, Southern Expanded Metal Co., Washington, D. C., and in other large cities.

Lever Jacks.—Every man who handles lifting jacks wishes to handle the jack that comes nearest to meeting every requirement of such a tool. These requirements are fully met by the device manufactured and known as the Maxon-Miller Lifting Jack. Railroad companies and other users and

railroad and mill supply dealers are invited to give this tool a careful examination and test. It is manufactured by H. M. Sciple, 631 Arch street, Philadelphia, Pa. He states that these jacks are guaranteed, simple in construction, easy and quick of operation, strong and durable. The fulcrum is nearer the load than with the usual lever jack, which consequently gives a greater leverage. A full description of the tool mentioned and all details necessary for a buyer to know are given in a leaflet now being distributed by Mr. Sciple.

Keeping Cool Without Effort.—Some people are fortunate enough to be able to select some agreeable place for spending the summer. But the majority of us look forward to the heated season with some dread, as we are compelled to follow our usual duties then, with possibly the relief of a brief vacation, usually snatched from business cares only when a period of rest becomes a physical necessity. These facts suggest that now is the time to seek the modern equipment, the electric fan, for keeping cool our offices, factories and other establishments. The price of such fans is so small in comparison with the advantages derived from their use that it need hardly be considered. The Electric Supply Co. of 40 Drayton street, Savannah, Ga., issues an interesting leaflet regarding its fans. These are furnished in all sizes and styles, mechanically perfect and performing their duty at the minimum cost. Prospective buyers of this kind of electrical machines will be furnished particulars on request.

Repair Shops' Special Tools.—Portable tools for railway repair shops comprise a line of equipment that demands the most competent designers and manufacturers for their production in such perfection as to perform their special work satisfactorily—the locomotive cylinder boring bar and fixtures, special boring bar for compound engines, Corliss valve seat portable boring bar and fixtures, portable facing arm, attachments for taper boring, cylinder or dome facing machine and others that need not be named. Probably no man is more prominent or has been more successful in designing and building this class of tools than D. W. Pedrick, formerly of the Pedrick & Ayer Company. Mr. Pedrick is now directly supervising the manufacture of these tools in the plant of Messrs. H. B. Underwood & Co., 1025 Hamilton street, Philadelphia. This firm issues an illustrated catalogue of its special tools for repair shops, and states that it will maintain its previous reputation of making a high grade of tool, and will keep pace with the requirements of the times.

Steel Wheels and Wagons.—Steel is rapidly displacing wood in the construction of buildings, bridges, cars, agricultural implements, etc. It is constantly entering into favor in new directions, one of these being in wagon construction. The belief that steel could be substituted for wood in wagon construction with great success as to strength, endurance and finish resulted in the organization of the Steel Wheel & Wagon Co., which has established a large plant at Pueblo, Col. The company manufactures steel wheels, steel wagons, steel gears, pressed steel wagon beds, platform, spring and business trucks. The different types offered include farm, grain, mountain ore and coal delivery wagons and other kinds of vehicles. W. H. Schofield is president and general manager; Geo. W. Bowen, vice-president; S. I. Heyn, secretary, Fred. O. Roof, treasurer, and H. P. Wright, assistant treasurer. The company solicits inquiries, as it is desirous of making known the merits of its wagons and wagon materials in all sections of the country. Catalogue now ready.

Francke Four-Ported Engine.—This engine is a type that will interest many who are not already acquainted with its merits. It is of the two-cylinder trunk type, which has amply demonstrated that it is adapted to attain the maximum rotative speed with the minimum of attendance required. It has only one valve, so designed as to give a perfect four-valve steam distribution, and so simple in construction that the first cost is not higher than with first-class simple engines, while the highest grade of workmanship and material is maintained, and the final cost is claimed to be less because of the reduction in cost of foundation, erection and transportation. The Francke Four-Ported Engine is furnished, when desired, without any or all of the following parts: sub-base, wheel or governor. It is furnished either automatic or with throttling governor. A concise and clear description, with illustrations, of the Francke engine is presented in the pamphlet issued by the manufacturer, W. J. Francke, New Brunswick, N. J.; Thomas C. Maxfield, sole sales agent, 120 Liberty street, New York.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office Manufacturers' Record,
Baltimore, Md., May 6.

Cotton Duck issues continued to be the principal feature in the Baltimore stock market during the past week. There was a sharp decline in the bonds, owing to unfavorable reports and a fractional weakness in stock. Subsequently, however, a partial recovery was made in both. The merger plan is expected soon. United Railways issues were about steady, as was Consolidated Gas and United Light & Power. Seaboard improved slightly, as did G. B. S. Brewing securities. Bank stocks were dull, and there was very little doing in trust-company shares. Investment securities dull. In the trading Cotton Duck income bonds dropped sharply from 25 to 24 and recovered to 23, while the 5 per cents fell from 70 to 67½ and recovered to 69. Cotton Duck stock sold down from 4 to 3¼, reacting to 3½, and United States Cotton Duck common sold at 4. United Railways common advanced from 12½ to 13; the scrip sold at 24; the incomes between 68½ and 68¾; the income scrip at 60, and the 4s at 93¼ to 93½. United Light & Power 4½s changed hands at 88½, and ex-coupon at 86¼. Consolidated Gas was traded in at 69¼ to 70¼; the 6 per cents at 110¼, and the 4½s at 101½ to 102. Seaboard common sold between 25½ and 26½, and the preferred from 42½ to 43; the 4 per cents from 82½ to 83, and the 5 per cents at 103½, and ex-coupon at 101¼ to 101½. G. B. S. Brewing common changed hands at 12½ to 13; the incomes at 36½ and 37, and then ex-coupon at 35 to 36½, and the scrip at 36½ to 38; the 1sts sold at 49½ to 51, and the 1st scrip at 53.

The trust-company group was quiet. Maryland Trust sold at 195 to 198; Continental at 198¼ to 200; International at 136; Union at 66, and Maryland Casualty at 50¼.

Atlantic Coast Line common was traded in from 128 to 129; the 1st 4s from 95½ to 95¾ down to 94½, with a recovery to 94¾; the new 4s sold at 86¾ and 87, and the Connecticut 4s, etc., at 91½; Georgia, Carolina & Northern 5s at 110; Baltimore City 3½s, 1930, 110½; do. 1940, 111½; Firemen's Insurance, 23¼ down to 22¾; Home Fire Insurance, 14¾; Hammond Ice, 45 to 47½; Baltimore & Annapolis Short Line 5s, 111½; South Bound 5s, 109¼ and 110; Knoxville Traction 5s, 101 and 101½; International Mercantile Marine common, 11¼; do. preferred, 31¾ to 32¾; Carolina Central 4s, 95; Florida Central & Peninsular 5s, 107; Baltimore Traction convertible 5s, 100; Maryland Telephone 5s, 86; City & Suburban 5s (D. C.), 98; Maryland 3s, 100½; Atlanta Street Railway 5s, 106½; Baltimore Refrigerating & Heating Co., 42; Alabama Consolidated Coal & Iron preferred, 85.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended
May 6, 1903.

Railroad Stocks.	Par.	Bid.	Asked
Atlanta & Charlotte.....	100	155	...
Georgia Sou. & Fla. 2d Pref.....	100	...	78
United Railways & Elec. Co.....	50	12½	13
Seaboard Railway Common.....	100	26	26½
Seaboard Railway Preferred.....	100	43¼	43¾
Atlantic Coast Line of Conn.....	100	290	300
Bank Stocks.			
Citizens' National Bank.....	10	30	...
Commercial & Far. Nat. Bank.....	100	127	132
Drovers & Mech. Nat. Bank.....	100	...	300
Farmers & Mer. Nat. Bank.....	40	63	...
Manufacturers' National Bk.....	100	102	...
National Bank of Baltimore.....	100	...	130
National Exchange Bank.....	100	194	...

National Howard Bank.....	10	12	...
National Marine Bank.....	30	37	...
National Mechanics' Bank.....	10	11 1/2	...
Old Town Bank.....	10	10 1/4	11

Trust, Fidelity and Casualty Stocks.

American Bonding & Trust.....	50	...	90
Continental Trust.....	100	...	100
Fidelity & Deposit.....	50	158	165
International Trust.....	100	135	130 1/2
Maryland Casualty.....	25	50	52
Maryland Trust.....	100	197	200
Mercantile Trust & Deposit.....	50	157 1/4	160
Union Trust.....	50	65	68
U. S. Fidelity & Guaranty.....	100	140	145

Miscellaneous Stocks.

C. H. & S. Brewing Co.....	100	13	13 1/2
United Elec. L. & P. Pref.....	50	37 1/2	38
Cotton Duck Voting Trust.....	100	3	4 1/4
Consolidated Coal.....	100	83 1/2	85
George's Creek Coal.....	100	85	...
Consolidated Gas.....	100	70	70 1/4
Ala. Con. C. & I. Common.....	100	31	35
Ala. Con. C. & I. Preferred.....	100	82 1/2	85

Railroad Bonds.

Albany & Northern 5s.....	95 1/2	95	...
Atlanta & Charlotte 1st 7s, 1907.....	110	112 1/2	...
Char. Col. & Aug. 2d 7s, 1910.....	112 1/2	...	...
Columbia & Greenville 1st 6s, 1905.....	117	...	...
Georgia, Car. & North, 1st 5s, 1929.....	109 3/4	110 1/2	...
Georgia South. & Fla. 1st 5s, 1945.....	115	...	...
Georgia Pacific 1st 6s, 1922.....	121	...	...
Petersburg, Class A 5s, 1926.....	114	...	...
Petersburg, Class B 6, 1926.....	121	...	...
Seaboard & Roanoke 6s, 1916.....	105	...	...
Seaboard & Roanoke 5s, 1926.....	112 1/2	...	...
Southern Railway Co. 5s, 1904.....	115 1/2	...	...
Virginia Midland 1st 6s, 1906.....	104	...	...
Virginia Midland 2d 6s, 1911.....	110	...	...
Virginia Midland 3d 6s, 1916.....	113	...	...
Virginia Midland 4th 3-4-5s, 1921.....	110	...	...
Virginia Midland 5th 5s, 1926.....	111	114	...
West. North Carolina Con. 6s, 1914.....	115	...	...
West Virginia Central 1st 6s, 1911.....	112	114	...
Wilmington, Col. & Aug. 6s, 1910.....	113 1/2	115	...
Wilmington & W. Gold 5s, 1925.....	120	...	...
Charleston City Railway 5s, 1923.....	105	...	...
Charleston Con. Electric 5s, 1909.....	92	92	...
Knoxville Traction 1st 5s, 1928.....	101	102 1/2	...
Newport News & Old Pt. 6s, 1938.....	108	...	...
Norfolk Street Railway 5s, 1944.....	110 1/2	...	...
United Railways 1st 4s, 1919.....	93 1/4	93 1/2	...
United Railways Inc. 4s, 1919.....	68 1/4	68 1/2	...
Seaboard 4s.....	82 1/2	83	...
Seaboard 10-year 5s.....	101 1/2	101 1/2	...
Lexington Railway 1st 5s.....	104	104	...
Georgia & Alabama Con. 5s.....	109 1/2	109 1/2	...
South Bound 5s.....	110	...	...
Augusta Railway & Elec. 1st 5s.....	102	...	...

Miscellaneous Bonds.

Mt. V. & Woodb'y Cot. Duck 5s.....	68 1/2	69 1/2	...
Mt. V. & Woodb'y Cot. Duck Inc.....	22 1/2	25	...
G. B. & S. Brewing 1st 3-4s.....	50 1/2	51 1/4	...
G. B. & S. Brewing 2d Incomes.....	36 1/2	37	...
United Elec. Light & Power 4 1/2s.....	85	86 1/2	...
Consolidated Gas 6s, 1910.....	110 1/2	110 1/4	...
Consolidated Gas 5s, 1929.....	112 1/2	...	...

SOUTHERN COTTON MILL STOCKS

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending May 5.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	75	...
Aiken Mfg. Co. (S. C.).....	90	92
Anderson Cotton Mills (S. C.).....	124	125
Arkwright Mills (S. C.).....	115	120
Augusta Factory (Ga.).....	65	...
Avondale Mills (Ala.).....	90	...
Belton Mills (S. C.) (old).....	100	...
Bibb Mfg. Co. (Ga.).....	108 1/4	...
Brandon Mills (S. C.).....	101	...
Buffalo Cotton Mills (S. C.).....	101	...
Buffalo Cotton Mills (S. C.) Pfd.....	97 1/2	...
Cabarrus Cotton Mills (N. C.).....	122	...
Chiquola Mfg. Co. (S. C.).....	100	...
Clifton Mfg. Co. (S. C.).....	170	177
Clinton Cotton Mills (S. C.).....	118 1/4	...
Courtenay Mfg. Co. (S. C.).....	130	135
Columbus Cotton Mills (Ga.).....	94	100
Dallas Mfg. Co. (Ala.).....	90	...
Darlington Mfg. Co. (S. C.).....	94	...
Eagle & Phenix Mills (Ga.).....	99	...
Easley Cotton Mills (S. C.).....	100	87 1/4
Enoree Mfg. Co. (S. C.).....	75	80
Enterprise Mfg. Co. (Ga.).....	150	...
Exposition Cotton Mills (Ga.).....	100	103
Gaffney Mfg. Co. (S. C.).....	100	103
Galveston Cotton Mills (Ga.).....	85	...
Granby Cotton Mills (S. C.).....	100	100
Granby Cot. Mills (S. C.) 1st Pfd.....	90	102
Grantville Mfg. Co. (S. C.).....	160	163
Greenwood Cotton Mills (S. C.).....	99	...
Grendel Mills (S. C.).....	105	...
Hendretta Mills (N. C.).....	203 1/4	...
King, John P. Mfg. Co. (Ga.).....	90	91
Lancaster Cotton Mills (S. C.).....	100	110
Lancaster Cot. Mills (S. C.) Pfd.....	104	...
Langley Mfg. Co. (S. C.).....	100	102
Laurens Cotton Mills (S. C.).....	170	...
Lockhart Mills (S. C.).....	101	...
Louise Mills (N. C.).....	95	...
Louise Mills (N. C.) Pfd.....	102	...
Marion Cotton Mills (S. C.).....	104	...
Marion Cotton Mills (S. C.) Pfd.....	104	...
Mayo Mills (N. C.).....	170	...
Mills Mfg. Co. (S. C.).....	99	...
Mills Mfg. Co. (S. C.) Pfd.....	103	...
Monarch Cotton Mills (S. C.).....	96	...
Monaghan Mills (S. C.).....	100	...
Newberry Cotton Mills (S. C.).....	120	113 1/2
Norris Cotton Mills (S. C.).....	110	...
Olympia Cotton Mills (S. C.).....	104	...
Olympia Cotton Mills (S. C.) Pfd.....	100	100
Odell Mfg. Co. (S. C.).....	100	103
Orangeburg Mfg. Co. (S. C.) Pfd.....	100	102
Orr Cotton Mills (S. C.).....	103	...
Pacolet Mfg. Co. (S. C.).....	195	...
Pelzer Mfg. Co. (S. C.).....	172	...
Piedmont Mfg. Co. (S. C.).....	135	...
Poe, F. W. Mfg. Co. (S. C.).....	140	...
Richland Cotton Mills (S. C.).....	99	...
Richland Cotton Mills (S. C.) Pfd.....	102	...
Roanoke Mills (N. C.).....	95	100
Saxon Mills (S. C.).....	102	...
Sibley Mfg. Co. (Ga.).....	65	67
Southern Cotton Mills (N. C.).....	135	...
Spartan Mills (S. C.).....	125	150
Trion Mfg. Co. (Ga.).....	135	...
Triumph Mills (S. C.).....	135	...
Union Cotton Mills (S. C.).....	152 1/4	...
Union Cotton Mills (S. C.) Pfd.....	100	102
Victor Mfg. Co. (S. C.).....	130	136
Warren Mfg. Co. (S. C.).....	100	...
Warren Mfg. Co. (S. C.) Pfd.....	106	...
Washington Mills (Va.) Com. & Pfd.....	20	20
Washington Mills (Va.) Common.....	110	...
Whitney Mfg. Co. (S. C.).....	110	...
Wilmington Cot. Mills (N. C.) Pfd.....	100	...

Wiscasset Mills (N. C.).....	115	118
Woodruff Cotton Mills (S. C.).....	98	...

New Corporations.

The stock for the Bank of Warsaw at Warsaw, N. C., has been subscribed.

It is reported that a new bank will be established at Bessemer, Ala., by Birmingham capitalists.

The Leonora Deposit Bank, capital \$15,000, has been incorporated at Morehead, Ky. Dr. L. P. V. Williams will be president.

The Lake City Abstract Co. of Lake City, Fla., capital \$5000, has been incorporated by O. R. Parker, Frank Clark and F. L. Hemmings.

F. H. Hedrick will, it is reported, be president of the new bank at Kingston, I. T., and G. P. Wheeler of Miami, Mo., will be cashier; capital \$25,000.

The Bank of Bradford, capital \$20,000, has been incorporated at Bradford, Tenn., by Jeff P. Martin, M. C. Boone, J. S. Alexander, D. H. Patterson and J. N. Alexander.

The Capron State Bank of Capron, Okla., has been chartered, with \$10,000 capital. The incorporators are W. J. French and W. G. McCline of Alva, C. L. Sample of Sumner.

The Exchange Bank of Milledgeville, Ga., capital \$25,000, has been incorporated by John Conn, E. E. Bass, A. J. Carr, John A. Callaway, Dixon Williams, L. M. Jones, T. O. Powell and W. T. Conn, Sr., all of Milledgeville.

The Manchester Bank has been incorporated at Manchester, Ky., with \$15,000 capital. The officers are Dr. I. S. Manning, president; S. H. Kash, vice-president, and John Rawlings, cashier. The bank will begin business June 1.

The First National Bank of Beggs, I. T., has been approved by the comptroller of the currency; capital \$25,000. The organizers are P. I. Brown, C. B. Drinker, Fred Comstock, Charles A. Post, H. C. Abbott and C. S. Reid.

The Bank of Saluda has been chartered at Saluda, S. C.; capital \$25,000. The officers and directors are: B. W. Crouch, president; Alvin Etheredge, vice-president; H. A. Webb, secretary; J. P. Lindler, cashier; M. A. Coleman, Dr. J. F. Daniel and W. T. Glenn.

The Bank of Lenoir at Lenoir, N. C., has been incorporated, with \$10,000 capital, which may be increased to \$50,000. The incorporators and their stockholdings are: G. W. F. Harper, \$3500; G. F. Harper, \$2000; G. L. Bernhardt, \$2000; J. M. Bernhardt, \$1000 and Mrs. E. H. Bernhardt, \$400.

The Bank of Carteret has been organized at Morehead City, N. C. The directors are R. W. Taylor, W. L. Arendell, Chas. S. Wallace, S. W. Wade, J. B. Morton, T. D. Webb, W. S. Chadwick, T. A. Uzzell and N. W. Taylor. The directors met and elected R. W. Taylor, president; W. S. Chadwick, vice-president. The election of cashier was deferred.

The Birmingham Savings Bank and the Alabama Trust & Savings Co. of Sheffield have been consolidated, with \$100,000 paid-up capital, and have begun business in Birmingham under the name of the American Trust and Savings Bank. The officers are G. B. McCormack, president; H. L. Badham, vice-president; H. B. Urquhart, cashier; George D. Reynolds, assistant cashier.

The Cotton Mill Mutual Fire Insurance Co. of Augusta, Ga., has been organized with James P. Verdery as president and Peleg A. Rhodes, secretary; directors, J. Gunby Gordon, president Eagle and Phoenix Mills, Columbia, S. C.; J. F. Hanson, president Bibb Manufacturing Co., Macon, Ga.; Thomas Garrett, Jr.,

president Langley Manufacturing Co., Langley, S. C.; J. D. Turner, president Exposition Cotton Mills, Atlanta; Benjamin Taft, secretary Cotton & Woolen Mutual Insurance Co., Boston, Mass.; Henry T. Grant, president Mercantile Mutual Fire Insurance Co., Providence, R. I.; James P. Verdery, president Enterprise Manufacturing Co., Augusta, Ga.; Peleg A. Rhodes, secretary of the company; W. B. Smith Whaley, president Olympia Mills, Columbia, S. C.; Landon Thomas, president John P. King Manufacturing Co., Augusta, Ga.; T. L. Hickman, president Graniteville Manufacturing Co., Graniteville, S. C.; Leroy Springs, president Lancaster Cotton Mills, Lancaster, S. C. The capital of the company is \$2,000,000, and it is to begin business June 1.

New Securities.

Griffin, Ga., is to vote on June 10 upon an issue of \$100,000 of 4 per cent. sewer, light and water bonds.

Monroe, La., has sold \$60,000 of water and light bonds to McDonald, McCoy & Co. of Chicago at 103 and accrued interest.

Kanawha county, West Virginia, will vote on May 9 for the purpose of issuing \$100,000 of 4 per cent. bonds to fund the county debt.

Campbell county, Virginia, will petition the legislature for authority to issue \$200,000 of bonds for macadamizing the county roads.

Nashville, Tenn., will vote some time this month upon the question of issuing \$1,000,000 of 4 per cent. bonds to pay the city subscription to the Tennessee Central Railroad.

The State of North Carolina has sold to Townsend Scott & Son and Wilson, Colston & Co., both of Baltimore, Md., \$300,000 worth of 4 per cent. bonds at their joint bid of 103.592 flat.

Sevier county, Tennessee, has sold \$40,000 of bonds to N. W. Harris & Co. of New York, \$24,000 of which are to be used for funding the county debt and \$16,000 to rebuild the Knoxville and Sevierville turnpike.

Financial Notes.

The Ittabena Bank at Ittabena, Miss., has increased its capital to \$100,000.

The Dublin Banking Co. at Dublin, Ga., has been made a State depository.

The Merchants and Planters' Bank at Gaffney, S. C., has increased its capital from \$50,000 to \$75,000.

The People's Savings Bank of Natchez, Miss., has amended its charter to increase its capital from \$10,000 to \$25,000.

The Lexington Gas Co. of Lexington, Ky., has transferred its property, rights and franchises to the Lexington Railway Co.

The Fourth National Bank of Montgomery, Ala., proposes to increase its capital on July 1 from \$100,000 to \$200,000.

The State Bank at New Iberia, La., has increased its capital from \$50,000 to \$100,000, and will, it is reported, become a national bank.

The Mercantile Trust Co. of St. Louis has been appointed official depository for the Bank of France during the World's Fair for the convenience of exhibitors and others from France who will visit the exposition.

The Provident Bank of New Orleans will vote on June 8 upon a proposition to convert the institution into a trust company to be known as the Provident Bank & Trust Co., and to increase the capital from \$100,000 to \$250,000.

The Mississippi Bankers' Association will hold its annual meeting at Hattiesburg, Miss., on May 13. Among the sub-

TABLE OF CONTENTS.

EDITORIAL:	Page.
Attempt to Shift the Issue in the Southern Education Scheme.....	315
Railways and National Unity.....	315
For Education at Atlanta.....	315
Separating School Taxes.....	316
Locomotive Building.....	316
The Panama Canal.....	316
Industries for the South.....	316
Buyers Getting Restless.....	316
The St. Louis Exposition.....	316
Looking for an Industrial Site.....	317
The Panama Canal: Guarantees of Honesty Needed.....	317
Keynotes of Prosperity.....	317
Fixing the Standards.....	319
Opportunities at Lumberton.....	319
For Alabama's Advancement.....	319
Good-Roads' Convention in St. Louis.....	320
Stimulating Production.....	320
Southern Gold-Mining.....	321
Copper-Mining in Carolina.....	321
RAILROADS:	
Denton to Pueblo.....	321
Tennessee Railroads.....	321
Araucanias Pass Deal.....	322
Through the Mountains.....	322
Draining Farm Lands.....	322
East & West of Georgia.....	322
Maryland & Pennsylvania.....	322
After New Coal Supplies.....	322
Carolina & Northwestern.....	322
Pearl & Leaf Extension.....	322
Atlanta Union Station.....	322
Washington Union Terminal.....	322
Northern Central Earnings.....	322
Kanawha & Northern.....	322
New Depot at Farmville.....	322
Railroad Notes.....	322
Pushing the Shipbuilding Plant.....	322
Steel Car Plant for Baltimore.....	322
TEXTILES:	
Southern Cotton Spinners.....	323
A Model Mill Town.....	323
The Siluria Mills.....	323
Doubling a \$450,000 Mill.....	323
A \$500,000 Plant.....	323
Developing Neal's Shoals.....	323
Completing \$250,000 Enlargement.....	323
Improvements to Cost \$25,000.....	323
A \$300,000 Mill.....	323
The Cotton Movement.....	323
Textile Notes.....	323
COTTONSEED OIL:	
Oil-Mill Superintendents.....	324
Cottonseed-Oil Notes.....	324
PHOSPHATES:	
Phosphate Markets.....	324
Phosphate and Fertilizer Notes.....	324
LUMBER:	
Lumber Market Reviews:	
Baltimore.....	325
Norfolk.....	325
Savannah.....	325
Brunswick.....	325
Jacksonville.....	325
Lumber Notes.....	325
MECHANICAL:	
Federal Manufacturing Co. (Illus.).....	326
Notes from Northern Machine Shops (Illustrated).....	326
Morehead Traps (Illus.).....	326
CONSTRUCTION DEPARTMENT:	
New Enterprises.....	327
Building Notes.....	329
Railroad Construction.....	330
Machinery Wanted.....	331
Trade Notes.....	332
Trade Literature.....	333
FINANCIAL NEWS:	
Review of the Baltimore Market.....	333
Securities at Baltimore.....	333
Southern Cotton-Mill Stocks.....	334
New Corporations.....	334
New Securities.....	334
Financial Notes.....	334

jects to be discussed are State taxation, State-bank supervision and cotton insurance. The bankers will be in session for two days.

Reports of the condition of national banks in Oklahoma at the close of business April 9 show loans and discounts increased from \$7,985,906 to \$8,109,677, gold coin from \$254,064 to \$260,999, total specie from \$540,230 to \$559,555; individual deposits decreased from \$10,636,577 to \$10,496,166.

Announcement has been made at St. Louis, Mo., that the Colonial Trust Co. will consolidate with the Commonwealth Trust Co. It is stated that the terms of the merger provide that half the Colonial stock will be taken by the Commonwealth at \$225 per share and paid for with Commonwealth stock at \$325 per share. The balance of the Colonial stock will be bought at \$200 per share.

6
6
6
6
6

5
5
5

7
9
9
1
2
8

3.
3.
4
4
4
4
=

re
al
i-
a-
r,
al
i-
,-

t.
o.
h
of
al
n-
or
er
ek